

## **SMALL-SCALE PoA CDM VALIDATION REPORT**

**Managing Entity: Repsol YPF Comercial del  
Perú S.A. (RYCOPESA)**

### **VALIDATION OF THE PROGRAM OF ACTIVITIES:**

**Programme of activities to switch from residual  
fuel oil to LPG in manufacturing industries in  
Peru**

**AENOR REFERENCE: 2010/065/CDM/01**

**VERSION:03**

## VALIDATION REPORT

"Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru"

<b>Validation Report:</b>	AENOR Reference n°:		Version of this report:		Date:	
	2010/065/CDM/01		3		05/12/2012	
<b>SSC- PoA-DD:</b>	Title:		GSC publication date:		Comments received:	
	Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru		04/11/2010 (1 <sup>st</sup> ) 30/03/2012 (2 <sup>nd</sup> )		<input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	
<b>Parties involved:</b>	Host Party:		Other involved Parties:			
	Peru					
<b>Project Participant(s):</b>	In host Party:		In other involved Parties:			
	Managing Entity: Repsol YPF Comercial del Perú S.A. (RYCOPESA)					
<b>Size of the PoA:</b>	<input checked="" type="checkbox"/> Small scale <input type="checkbox"/> Large scale					
<b>Applied methodology/ies:</b>	Title:		Code:		N° version	
	Switching fossil fuels		AMS-III.B		16	
	Consolidated baseline and monitoring methodology for fuel switching from coal or petroleum fuel to natural gas		ACM0009		3.2	
<b>Applied tools:</b>	Title:		Version:			
<b>Emission reductions (ER):</b>		GSC PoA-DD:		Final PoA-DD:		
<input checked="" type="checkbox"/> Annual average of the ER (tCO <sub>2</sub> e)		212 (1st CPA-DD)		209 (1st CPA-DD)		
<input type="checkbox"/> Total ER (tCO <sub>2</sub> e)						
<b>Previous versions of this document:</b>			Version:		Date:	
			1		03/07/2012	
			2		20/07/2012	
<b>Report prepared by:</b>	Climate Change Unit. AENOR:					

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

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**Abbreviations**

AENOR	Spanish Association for Standardization and Certification
AMS-III.B	Switching fossil fuels -version 16
BM	Build Margin
CAR	Corrective action request
CL	Clarification Request
CDM	Clean Development Mechanism
CDM SSC-CPA-DD	Small Scale CDM Programme Activity Design Document
CDM SSC-PoA-DD	Small Scale CDM Programme Of Activities Design Document
CER	Certified emission reductions
CME	Coordinating and Managing Entity
DECISION 4/CMP.1	Simplified Modalities and Procedures for Small-Scale CDM Project Activities Annex II
DNA	Designated national authority
EB	Executive Board of the CDM of the Kyoto Protocol
EIA	Environmental Impact Assessment
GHG	Greenhouse Gasses
FAR	Forward Action Request
GSC	Global stakeholder consultation process
IPCC	Intergovernmental Panel on Climate Change
LPG	Liquefied petroleum gas
MP	Monitoring plan
MWh	Megawatt hour

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NGO	Non-Governmental Organization
OM	Operating Margin
PP	Project Participant
RYCOPESA	Repsol YPF Comercial del Perú S.A.
tC	Carbon tonne
TJ	Terajoule
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

**Table 1: Abbreviations**

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"Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru"

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## **1 INTRODUCTION**

### **1.1 Objective**

This validation concerns a small scale CDM Programme of Activities (hereinafter PoA) implemented by Repsol YPF Comercial del Perú S.A. (RYCOPESA) in Peru, to reduce emissions of CO<sub>2</sub> by means of the development of small scale CPAs to replace residual fuel oil consumption with a low-carbon fuel: liquefied petroleum gas (LPG), in manufacturing industries in Peru. RYCOPESA, a wholly owned subsidiary of Repsol YPF, is the coordinating entity of the Programme and will provide the incentives for undertaking the fuel switch.

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

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

### **1.2 Scope**

The scope of the validation is to assess all aspects of GHG reduction involved in the project, including the project design, the baseline, the CO<sub>2</sub> emissions, the determination of the emission factor of the grid to calculate the project emissions, and the procedures proposed for monitoring the emission reductions in the future.

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

- CDM SSC-PoA-DD [1-2], including baseline study and monitoring plan
- CPA\_0001\_AIB CPA-DD [3]
- CDM SSC-generic-CPA-DD [4]
- Approved Methodology: AMS-III.B “Switching fossil fuels” version 16 [5]
- ACM0009: “Consolidated baseline and monitoring methodology for fuel switching from coal or petroleum fuel to natural gas” Version 3.2 [6]
- Decision 4/CMP.1 and relevant decisions and guidelines from the EB.
- Guidelines for demonstrating additionality of microscale project activities, version 04 [7]

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- Guidelines on the demonstration of additionality of small-scale project activities (version 09.0) /8/
- Procedures for Registration of a Programme of Activities as a single CDM project activity and issuance of Certified Emission Reductions for a Programme of Activities, version 04.1 /9/
- Guidelines on the Assessment of Investment Analysis, version 05 /10/
- CDM Validation and Verification Manual version 01.2 /11/
- Letter of Approval from the DNA of Peru /12/
- Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, version 02.1 /23/
- Standard for sampling and surveys for CDM Project activities and Programme of activities (version 03.0) /24/
- Associated documentation (environmental requirements, investment analysis, etc)

The validation scope is defined as an independent and objective review of the PoA-DD, AIB CPA-DD and generic CPA-DD, the project’s baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. AENOR, based on the specific instruction for the Validation, Verification and Certification of Clean Development Mechanism (CDM) Project Activities (IE-DTC-039) /13/, has used a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.

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



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## 2 METHODOLOGY

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

The validation of the programme began in November 2010 and was concluded in December 2012. The validation was performed in the manner of an audit, where, first, a desk review of the PoA-DD, AIB CPA-DD and generic CPA-DD was undertaken against the approved methodology and CDM and other relevant criteria. The desk review was followed by a site visit to AIB CPA-DD project site and key stakeholders in Peru.

The PoA-DD, and the CPA-DD were published for Global Stakeholder Consultation (GSC) in UNFCCC website on 04/11/2010. These documents were originally published adopting AMS-III.AN methodology. Due to the fact the PoA changed to adopt AMS-III.B methodology, PoA-DDs were republished for GSC on 30/03/2012.

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

Due to the decision of the UNFCC Secretariat to declare as incomplete the first request for registration (on 13 September 2012), a new version of the validation report has been prepared. This new version includes clarifications requested by the Secretariat.

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

Topic	Date
Submission of PoA-DD for global stakeholder consultation process	04/11/2010 (1 <sup>st</sup> ) 30/03/2012 (2 <sup>nd</sup> )
On-site visit	13-15/12/2010
Validation Protocol - Version 01 ( <i>related to AMS-III.AN meth.</i> )	11/02/2011
Final Validation Report	20/07/2012
New Validation Report submitted as response to <i>Request Incomplete</i> Status	05/12/2012

**Table 2: Sequence of the main validation activities**

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## 2.1 Appointment of team members and technical reviewers

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

Name	Qualification	
	Position in the team	Technical areas
Luis Robles	Chief Validator and Technical Expert	<b>TA 1.1</b>
Pablo Taboada	Validator	
Jose Antonio Gesto	Validator	
Fernando Segarra	Technical Reviewer	<b>TA 1.1</b>
Marcelino Pellitero	Technical Reviewer	

**Table 3: List of the personnel involved**

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

TA code	Technical area
TA 1.1	Thermal energy generation from fossil fuels and biomass including thermal electricity from solar (COMPLEX);
TA 1.2	Energy generation from renewable energy sources.
TA 2.1	Electricity distribution;
TA 2.2	Heat distribution
TA 3.1	Energy demand
TA 4. 1	Cement sector (COMPLEX);
TA 4.2	Aluminium (COMPLEX);
TA 4.3	Iron and steel (COMPLEX);
TA 4.4	Refinery (COMPLEX)
TA 5.1	Chemical process industries (COMPLEX).
TA 6.1	Construction.

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TA code	Technical area
TA 7.1	Transport.
TA 8.1	Mining and mineral processes, excluding those included in TA 8.2 below;
TA 8.2	Oil and gas industry, coal mine methane recovery and use (COMPLEX).
TA 9.1	Metal production.
TA 10.1	Mining and mineral processes, excluding those included in TA 10.2 below;
TA 10.2	Oil and gas industry, coal mine methane recovery and use (COMPLEX).
TA 11.1	Chemical process industries (COMPLEX);
TA 11.2	GHG capture and destruction.
TA 12.1	Chemical process industries (COMPLEX).
TA 13.1	Waste handling and disposal;
TA 13.2	Animal waste management.
TA 14.1	Forestry
TA 15.1	Agriculture
TA 15.2	Animal waste management.

**Table 4: List of technical areas**

## 2.2 Document review

The POA-DD, AIB CPA-DD and generic CPA-DD submitted by the PPs were reviewed against the approved methodology and against CDM and other relevant criteria. Additional background documents related to the project design, baseline and financial analysis were also made available before and during the on-site visit in Peru.

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

The reviewed documents used during the validation process are listed in section 8 of this report.

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## 2.3 Follow-up actions

The AENOR validation team composed by Pablo Taboada and Luis Robles conducted interviews with project developers and main stakeholders in Peru to confirm selected information and to resolve issues identified in the document review.

On 13-15/12/2010, AENOR's validation team performed interviews and physical site inspections with project stakeholders to confirm relevant information, and to resolve issues identified in the document review. During the visit, representatives from Peru project participants, in addition to relevant local stakeholders such as local authorities and local inhabitants, affected by the PoA were interviewed. Also, the AENOR team visited the Peruvian DNA representative.

Interviewed organization Person/Position	Interview topics
<b>Carbon Unit REPSOL</b> Jamie MacKinnon Ángel Bueno Sánchez-Luengo <b>RYCOPESA</b> Luis Alberto de la Torre Vivar Benjamín Bisso Pichilingue Diego Valencia Uculmana Gonzalo Sevillano Gainza <b>AIB</b> Christian Caballero Bernal Rubén Pinto Portuguese <b>DNA Perú</b>	Programme design. System management. Compliance with environmental law. Permits and authorizations applicable to the Programme Additionality assessment. Ex-ante baseline determination: Opinion about the Programme. Knowledge of the environmental impacts. Benefits for the community. PoA compliance with local policies and legislation

**Table 5. Interview topics**

## 2.4 Findings

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

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

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

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- a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
- b) The CDM requirements have not been met;
- c) There is a risk that emission reductions cannot be monitored or calculated.

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

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

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

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

## **2.5 Internal Quality Control**

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

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### **3 VALIDATION FINDINGS**

#### **3.1 Approval**

The Letter of Approval from the Peruvian DNA has been provided to the validation team directly by the project participant. The LoA was issued on 14/03/2011 (REF: 48-2011-DGCCDRH/DVMDERN/MINAM by the DNA). AENOR confirms that the LoA states the following:

- Peru is a Party of the Kyoto Protocol and that participation in CDM project activities is voluntary.
- Confirms that “Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru” contributes to Peru’s sustainable development
- Note the participation of Repsol YPF Comercial del Perú S.A. (RYCOPESA) as managing entity of the PoA.
- The LoA refers to the precise proposed CDM project activity title in the PoA-DD being submitted for registration.

AENOR confirms that the LoAs from Peru has been issued by the party’s Designated National Authority and does not doubt the authenticity of the letter of approval received from the PP; hence AENOR confirms that the LoA is in compliance with paragraphs 45-48 of the VVM v.1.2. In addition, the validation team of AENOR visited the Peruvian DNA which confirmed the award of the LoA for the proposed PoA.

The validation did not reveal any information that indicates that the programme can be seen as a diversion of ODA funding towards Peru.

#### **3.2 Participation**

Only one Party, Peru, is involved in the project.

The host Party Peru ratified the Kyoto Protocol by Congressional Resolution no 27824 (2002) and has appointed a DNA.

The PoA CME (Coordinating and Managing Entity) is RYCOPESA, which is authorized as Peruvian Project Participant by the host Party Peruvian DNA. The project participant has been listed in section A.3 of the final PoA-DD. Information regarding project participant is confirmed as consistent in the latest PoA-DD and AIB CPA-DD.

AENOR confirms that no entities other than the approved as project participant is included in the final PoA-DD.

#### **3.3 Programme Design Documents**

Due to the clarifications and corrective actions requested during the validation process, the project participant made a final version of the PoA-DD dated on 08/11/2012 and the Generic CPA-DD, which include corrections and clarifications to all issues raised.

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

AENOR considers that the guidelines still in force for the completion of the PoA documents have been followed. Relevant information was provided by the Managing entity and/ or project participants in the applicable PoA sections. Completeness was assessed through the protocol included in Annex 1.

### **3.4 Programme description**

The following description of the project as per PoA-DD, generic CPA-DD and specific CPA-DD (AIB) could be verified during the on-site visit:

The Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru aims to offering incentives to industrial facilities in Peru to replace residual fuel oil consumption with a low-carbon fuel: liquefied petroleum gas (LPG). Repsol YPF Comercial de Perú S.A. (RYCOPESA), is the coordinating entity of the Programme and will provide the incentives for undertaking the fuel switch. The Programme of activities will be undertaken in industries within the geographical boundary of Peru. These industries include either new facilities or retrofit/replacement of existing installations. Residual fuel oil, currently combusted in equipment for energy output generation purposes, will be replaced by LPG. The potential CPAs are mainly small to medium sized industrial consumers currently using residual fuel. These can be found in many different sectors of the economy, all of which are within the scope of this PoA.

The PoA CME has confirmed that there is no diversion of ODA involved. There is no public funding for the PoA. This issue was confirmed by the validation team during the onsite visit. The starting date of the proposed PoA is the date of publishing for the very first time of the PoA DD for global comment period on 04/11/2010. This is justified in section 3.6.1 of this report. The length of PoA is taken as 28 years.

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

- A review of data and information (see section 8).
- An on-site visit to the place where the associated real case CPA is being implemented and interview with relevant stakeholder and personnel with knowledge of the project in attendance.
- A review of information related to similar projects or technologies which have been used to validate the accuracy and completeness of the project description.

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

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### **3.5 Baseline methodology**

The PoA-DD describes the baseline methodology, which is in conformance with the approved baseline methodology AMS-III.B version 16 entitled *Switching fossil fuels*. This version of the methodology is currently in force.

The PoA-DD applies to calculate the leakage emissions the ACM0009 methodology (version 3.2), *Consolidated baseline and monitoring methodology for fuel switching from coal or petroleum fuel to natural gas*.

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

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

#### **3.5.1 Applicability of the selected methodology to the Programme of Activities**

The selected baseline and monitoring methodology used for the Programme of Activities is AMS-III.B “Switching fossil fuels” version 16, which is valid from 16 March 2012 onwards and was previously approved by the CDM Executive Board.

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

1. *This methodology comprises fossil fuel switching in industrial, residential, commercial, institutional or electricity generation applications*

This PoA applies to Peruvian industries that switch from a fossil fuel to a lower carbon content fossil fuel.

2. *Fuel switch may be in a single element process or may include several element processes within the facility. Multiple fossil fuel switching in an element process however is not covered under this methodology.*

The fuel switch will be carried out in a single element process or will include several element processes within the facility. In those element processes that will be undertaken in the PoA, a single energy source (residual fuel oil in the baseline and LPG after the implementation of the Programme activity) is consumed in single equipment (boiler, furnace, turbine, etc) in order to generate a single output (steam, heat or electricity). No multiple fuel switches will be carried out in this PoA.



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3. *This methodology is applicable for new facilities as well as for retrofit or replacement of existing installations.*

The PoA covers: 1) the retrofit of existing installations by replacing the fuel storage, distribution and burning system; 2) the installation of the fuel storage, distribution and burning system in new facilities in which residual fuel oil would have been consumed in the absence of the PoA.

4. *Fuel switching may also result in energy efficiency improvements. If the project activity primarily aims at reducing emissions through fuel switching, it falls into this methodology. If fuel switching is part of a project activity focused primarily on energy efficiency, the project activity falls under a Type II methodology*

The Programme of Activities is focused on reducing emissions by switching fuels and does not seek to improve energy efficiency. The PoA includes the installation of new LPG burners, storage tanks and feeding systems at the industrial plants. The aim of the PoA will not be to improve energy efficiency in any case.

5. *New facilities (Greenfield projects) and project activities involving capacity additions compared to the baseline scenario are only eligible if they comply with the related and relevant requirements in the general guidelines to SSC CDM methodologies. The requirements concerning demonstration of the remaining lifetime of the replaced equipment shall be met as described in the general guidelines to SSC CDM methodologies. If the remaining lifetime of the affected systems increases due to the project activity, the crediting period shall be limited to the estimated remaining lifetime, i.e. the time when the affected systems would have been replaced in the absence of the project activity*

In case of CPAs involving new facilities or capacity additions compared to the baseline scenario, the Programme activity will be included in the PoA if it complies with the related and relevant requirements in the General Guidelines to SSC methodologies (version 19). The Programme activities cover only the replacement of the fuel storage, distribution and burning system. That will not affect the life of the thermal energy conversion equipment. Additionally, in the baseline scenario, if it becomes necessary to replace the equipment at the end of its useful life, it would be with a view to continuing to use the same type of residual fuel oil, since it is a more economical option than switching to LPG in the absence of the PoA

6. *This methodology is not applicable to project activities that propose switch from fossil fuel use in the baseline to renewable biomass, biofuel or renewable energy in the project scenario. A relevant Type I methodology shall be used for such project activities that generate renewable energy displacing fossil fuel use. This methodology is also not applicable to project activities involving the use of waste gas; these project activities might be eligible under AMS-III.2.*

The fuel switch to be undertaken in the Programme activities will be from residual fuel oil to LPG.

7. *The facility may involve grid connected elemental processes however this methodology does not cover emission reductions on account of shift from use of a grid electricity or electricity exported to a grid.*

This PoA does not involve emission reductions on account of shift from use of grid electricity.

8. *This category is applicable to project activities where it is possible to directly measure and record the energy use/output (e.g. heat, steam and electricity) and consumption (e.g. fossil fuel) within the project boundary. In case of project activities that meet the criteria under paragraph 17 below, this methodology is applicable only where it is possible to directly measure and record at least the energy consumption in the element process (e.g. fossil fuel input).*

This Programme of Activities will involve CPAs in which it is possible to directly measure and record the energy output (e.g. steam, heat or electricity) and consumption (e.g. fossil fuel) within the project boundary.

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In case of CPAs in which the estimated annual emission reductions are equal to or less than 600 tCO<sub>2</sub>e per year it will be possible to directly measure and record at least the energy consumption (e.g. fossil fuel)

9. *Heat, steam or electricity produced under the project activity shall be for on-site captive use and/or export to other facilities included in the project boundary. In case of electricity generation plants, the generated electricity may also be supplied to users via mini/isolated grid(s) system exclusively supplied by fossil fuel units.*

Heat, steam or electricity produced under the CPAs are expected to be mainly for on-site captive use. However, in those CPAs in which the electricity generated is exported to other facilities included in the project boundary, the electricity supplied via mini/isolated grid(s) system will be exclusively supplied by fossil fuel units.

10. *In case energy produced by the project activity is delivered to another facility, or facilities, within the project boundary, a contract between the supplier and consumer(s) of the energy will have to be entered into specifying that only the facility generating the energy can claim emission reductions from the energy displacement.*

In those CPAs in which energy produced by the project activity is delivered to another facility, or facilities, within the project boundary, a contract between the supplier and consumer(s) of the energy will be entered into specifying that only the facility generating the energy (CPA) will claim emission reductions from the energy displacement

11. *Regulations do not constrain the facility from using the energy sources cited in paragraph 1 before or after the fuel switch. Regulations do not require the use of low carbon energy source (e.g. natural gas or any other fuel) in the element processes.*

There are no regulations in Peru that neither constrain from using residual fuel oil nor require the use of low-carbon energy sources.

12. *The project activity does not result in integrated process change. The purpose is to exclude measures that affect other characteristics of the process besides switch of energy sources e.g. operational conditions, type of raw material processed, use of non-energy additives, change in type or quality of products manufactured etc*

The PoA includes the installation of new LPG burners, storage tanks and feeding systems at the industrial plants. Therefore, CPAs will not involve an integrated change of the element process where the fuel switch is implemented. It is expected that the operational conditions, the type of raw material processed, the type or quality of the products manufactured, etc will remain equivalent throughout the crediting period and will be comparable to the operational conditions, the type of raw material processed, the quality of the products manufactured, etc in the baseline.

13. *Measures are limited to those that result in emission reductions of less than or equal to 60 kt CO<sub>2</sub> equivalent annually.*

Programme activities to be included in the PoA will not exceed 60 kt of CO<sub>2</sub> in any case.

14. *The project boundary is the physical, geographical site where the switching of energy source takes place. It includes all installations, processes or equipment affected by the switching. In case energy produced by the project activity is delivered to another facility, the boundary also extends to the industrial, commercial facilities consuming energy generated by the system.*

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The project boundary will be the physical, geographical site where the switching of energy source takes place. It is expected that it will include the replacement of the fuel storage, distribution and burning system. In those CPAs in which the energy produced is delivered to another facility, the boundary also will comprise the industrial, commercial facilities consuming energy generated by the system.

15. *In case of existing facilities, historical information (detailed records) on the use of fossil fuels and the energy output (e.g. heat, steam or electricity) in the element process from at least three years prior to project implementation shall be used in the baseline calculations, e.g. information on coal use and heat output by a district heating plant, diesel use and steam generated by an industrial plant, liquid fuel oil use and electricity generated by a generating unit (records of fuel used and output can be used in lieu of actual collecting baseline validation data). For facilities that are less than three years old, all historical data shall be available (a minimum of one year data would be required).*

Existing facilities to be included in the PoA will have historical information (detailed records) on the use of fossil fuels and the energy output in the element process from at least three years prior to project implementation. For facilities that are less than three years old, all historical data will be available with a minimum of one year. In cases where the estimated annual emission reductions are equal to or less than 600 tCO<sub>2</sub>e per year per element process a simplified approach for calculating emission reductions will be used and the amount of fossil fuel consumed in the project activity in year y, FC<sub>y</sub>, will be used as a proxy for determining baseline emissions.

16. *For existing facilities having no historical data/information on baseline parameters such as efficiency, energy consumption and output (e.g. the available data is not reliable due to various factors such as the use of imprecise or non-calibrated measuring equipment), the baseline parameters can be determined using a performance test/measurement campaign to be carried out prior to the implementation of the project activity. The project proponent may follow the relevant provisions from the Tool to determine baseline efficiency of thermal and electricity systems. In the case of project activities that export to other facilities within the project boundary, historical data from the recipient plants is also required.*

For those existing facilities in which no historical data/information on baseline parameters such as efficiency, energy consumption and output are available, a performance test/measurement campaign will be carried out prior to the implementation of the project activity, to determine the baseline parameters. In cases where the estimated annual emission reductions are equal to or less than 600 tCO<sub>2</sub>e per year per element process a simplified approach for calculating emission reductions will be used and the amount of fossil fuel consumed in the project activity in year y, FC<sub>y</sub>, will be used as a proxy for determining baseline emissions.

17. *In case of project activities where the estimated annual emission reductions of each of the element processes are equal to or less than 600 tCO<sub>2</sub>e per year per element process an alternative approach may be used to calculate baseline emissions as per paragraph 21 using equation 3 instead of applying equation 1.*

In case of CPAs where the estimated annual emission reductions of each of the element processes are equal to or less than 600 tCO<sub>2</sub>e per year per element process, an alternative approach will be used to calculate baseline emissions based on the amount of fossil fuel consumed in the project activity in year y.

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AENOR confirms, by means of a desk review of the PoA documentation and interviews during the onsite visit, the applicability of the selected methodology to the Programme of Activities. The latest version of the PoA-DD adequately describes the fulfilment of all the different applicability conditions of the methodology and no deviation from the methodology has been necessary.

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

### **3.5.2 Programme boundary**

The boundaries (geographically and related to GHG sources / sinks) are correctly given in sections A.4.1.2 and A.4.2.1 of the PoA-DD.

The geographical boundary of this PoA is the geographical area of Peru.

According to methodology AMS-III.B, version 16, the project is the physical, geographical site where the switching of energy source takes place. It includes all installations, processes or equipment affected by the switching. In cases where the energy produced by the project activity is delivered to another facility, the boundary also extends to the industrial, commercial facilities consuming energy generated by the system.

All emission sources and GHGs related included and excluded from the project boundary are clearly identified and described in a complete manner in the latest version of the PoA-DD in section E3.

The only emission source included within the limits of the Programme activity is the combustion of fuel (residual fuel oil in the baseline and LPG after the implementation of the Programme activity) by each of the CPA included in the Programme of Activities to obtain the energy output.

The only gas included within the limits of the Programme activity will be CO<sub>2</sub>, since it is the primary emission from the combustion of fossil fuels. The gases CH<sub>4</sub> and N<sub>2</sub>O are excluded from the scope of the Programme activity for reasons of materiality. However, leakage from the extraction, refining, transportation and distribution of the fuels are calculated as per the ACM0009 methodology (version 3.2).

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

The validation team states that the identified boundary and the selected sources and gases are correctly justified by the project proponent in the PoA-DD, and they are in accordance with the methodology AMS-III.B version 16.

### **3.5.3 Baseline identification**

Regarding the baseline identification, the baseline scenario is considered in the Programme of Activities:

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the baseline has been determined to the current practice in industry of consuming residual fuel oil for process heating. This conclusion is based on the fact that residual fuel oil is the most common fuel in Peru for industrial processes, and the energy matrix for industry in Peru has been relatively constant in terms of the mix of fuels used. Several studies on fuel consumption has been used to support the identification of the baseline (*IEA Statistics, Oil in Peru in 2006* [15]; *National Survey of Boilers (ENC) taken by the Ministry of Industry, Tourism, Integration and International Trade Negotiations in 2000 (MITINICI 2000)*). [16] This issue has also been checked by means of interviews with the CPA implementer during the onsite visit.

It is noteworthy that, as verified by the validation team, applicable regulations and environmental permits requirements do not constrain the use of heavy fuel oil in industrial area where the first CPA is located. As assessed by the validation team, there are no local requirements for emissions of atmospheric pollutants which would be necessarily met inter-alia by the implementation of the proposed project activity.

Moreover, there is no legislation or ordinance in Peru which compels steam boilers being fuelled by natural gas or which would make the combustion of natural gas in steam boilers unlawful.

The validation team considers the baseline determination as transparent and reasonable in order to determine the most realistic baseline scenario.

### 3.5.4 Algorithms and/or formulae used to determine emission reductions

The baseline emissions and emission reductions are calculated according to the equations established in AMS-III.B *Switching fossil fuels*, version 16, and in accordance with the IPCC National Inventory Guidelines (2006 version).

To calculate the emission leakage emissions, the ACM0009 methodology (version 3.2) *Consolidated baseline and monitoring methodology for fuel switching from coal or petroleum fuel to natural gas* will be used, as is stated in the AMS-III. B ver.16

#### Baseline Emissions

According to the AMS-III.B methodology, version 16, the baseline emissions are determined according to the following 2 options:

Option 1: *CPAs with an estimated annual emission reductions more than 600 tCO<sub>2</sub> per year*

AMS-III.B methodology, version 16, establishes in its paragraph 18:

18. *The emission baseline is the current emissions of the facility expressed as emissions per unit of output. Baseline emissions shall be determined as follows*

$$BE_y = EF_{BSL} * Q_{PJ,y}$$

Where:

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$BE_y$  Baseline emissions in the project activity in year  $y$  (tCO<sub>2</sub>e)

$EF_{BSL}$  Emission factor for the baseline situation (tCO<sub>2</sub>/ MWh)

$Q_{PJ,y}$  Net energy output in the project activity in year  $y$  (MWh)

The emission factor in the baseline situation ( $EF_{BSL}$ ) is the coefficient for the fossil fuel used in the baseline expressed as emissions per unit of energy output and shall be calculated as following:

$$EF_{BSL} = \sum_{i,j} FC_{i,j,BL,y} * NCV_j * EF_{CO_2,j} / Q_{BSL,j}$$

Where:

$EF_{BSL}$  Emission factor for the baseline situation (tCO<sub>2</sub>/ MWh)

$FC_{i,j,BL,y}$  Amount of fuel  $j$  consumed by the element process  $i$  during the year  $y$  operating at the baseline energy scenario (mass or volume unit)

$NCV_j$  Net calorific value of the fuel type  $j$  (kJ /unit)

$EF_{CO_2,j}$  CO<sub>2</sub> emission factor of the fuel type  $j$  (tCO<sub>2</sub>/ kJ)

$Q_{BSL,j}$  Net energy generated in the element process  $j$  in the baseline situation during the corresponding period of time for which the total fuel consumption was taken, in accordance with paragraph 15 (MWh)

Option 2: CPAs with an estimated annual emission reductions equal to or less than 600 tCO<sub>2</sub> per year

AMS-III.B methodology, version 16, establishes in its paragraph 21:

21. *In case of project activities where the estimated annual emission reductions of each of the element processes are equal to or less than 600 tCO<sub>2</sub>e per year per element process the amount of fossil fuel consumed in the project activity in year  $y$ ,  $FC_y$ , can be used as a proxy for determining baseline emissions using the following equation:*

$$BE_y = FC_{PJ,y} * NCV_{FF,PJ,y} * EF_{FF,CO_2,BL}$$

Where:

$FC_{PJ,y}$  Amount of fuel consumed in the project activity during year  $y$  (mass or volume unit)

$NCV_{FF,PJ,y}$  Net calorific value of the fossil fuel used in the project activity in Tj/mass or volume unit

$EF_{FF,CO_2,BL}$  CO<sub>2</sub> emission factor of the fossil fuel used in the baseline activity (tCO<sub>2</sub>/Tj)

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### Project Emissions

According to the AMS-III.B methodology, version16, the emissions of the project are the emissions related to the consumption of fossil fuel. The project emissions are determined according to equation:

$$PE_y = FC_{PJ,y} * NCV_{FF,PJ,y} * EF_{FF,CO_2,PJ}$$

Where:

$FC_{PJ,y}$  Amount of fuel consumed in the project activity during year y (mass or volume unit)

$NCV_{FF,PJ,y}$  Net calorific value of the fossil fuel used in the project activity in TJ/mass or volume unit

$EF_{FF,CO_2,PJ}$  CO2 emission factor of the project fuel combusted in the project activity (tCO<sub>2</sub>/TJ)

### Leakage

Based on the methodology AMS-III.B, version 16, the following conditions apply in a Programme activity under a Programme of Activities:

*Leakage emissions resulting from fuel extraction, processing, liquefaction, transportation, re-gasification and distribution of fossil fuels outside of the project boundary shall be considered, as per the guidance provided in the leakage section of ACM0009. In case leakage emissions in the baseline situation are higher than leakage emissions in the project situation, leakage emissions will be set to zero.*

The leakage emission source considered is the fugitive methane emissions associated with the extraction, processing, transportation and distribution of the fuels considered in the baseline and project scenarios.

The quantity of LPG consumed in all element processes of the Programme activity in which the fuel switch has been undertaken will be multiplied by a specific emission factor for these upstream emissions ( $EF_{LPG,upstream,CH_4}$ ). The product of the quantity of residual fuel oil consumed multiplied by the respective methane emission factor ( $EF_{k,upstream,CH_4}$ ) will then be subtracted as follows:

$$LE_y = [FC_{Project,y} * NCV_{LPG,y} * EF_{LPG,upstreamCH_4} - \sum FC_{baelinek,y} * NCV_k * EF_{k,upstreamCH_4}] * GWP_{CH_4}$$

Where:

$LE_y$  Leakage emissions due to upstream fugitive CH<sub>4</sub> emissions in the y (tCO<sub>2</sub>e)

$FC_{Project,y}$  Quantity of LPG combusted in all element processes during the year y (mass unit)

$NCV_{LPG,y}$  Average net calorific value of the LPG burned in year y (GJ) per unit of mass or volume)

$EF_{LPG,upstreamCH_4}$  Emission factor of the upstream leakage emissions caused by the production of LPG (t per GJ) of fuel at the point of consumption)

$FC_{baelinek,y}$  Quantity of type k fuel (residual fuel oil) that would be burned in the absence of the project activity in all processes in the year y (t/year)

$NCV_k$  Average net calorific value of the type k fuel (residual fuel oil) that would be burned in the absence of the project in year y (GJ/t).

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$EF_{k,upstreamCH_4}$  Emission factor of the upstream leakage emissions caused by the production of type  $k$  fuel (residual fuel oil) in t per GJ of fuel produced

$GWP_{CH_4}$  Global warming potential of methane valid for the relevant commitment period.

No reliable and accurate national data on fugitive emissions for LPG and residual fuel oil is available in Peru. Additionally, detailed emissions factors for these fossil fuels are not included in the default values provided in methodology ACM0009 (version 03.2). Therefore, specific LPG and residual fuel oil upstream leakage emission factors ( $EF_{LPG,upstream,CH_4}$  and  $EF_{k,upstream,CH_4}$ ) need to be estimated so as to calculate the emission reductions in each CPA.

For this purpose, the document Fuel and Energy Production Emission Factors [17], written by Dr. C. A. Lewis as part of the MEET Project: Methodologies for Estimating Air Pollutant Emissions from Transport (project funded by the European Commission under the Transport RTD programme of the 4th framework programme) has been taken into account for the calculations and described accordingly in the PoA-DD.

All evidence, assumptions and data sources along with the spreadsheet for the determination of the emission reductions [14] have been provided to the validation team. AENOR has been able to reproduce the calculation obtaining the same results.

### Emission Reductions

According to the baseline methodology AMS-III.B version 16, the Emissions Reductions have been calculated as follows:

$$ER_y = BE_y - PE_y - LE_y$$

Where:

$ER_y$  Emission reductions in year  $y$  (t CO<sub>2</sub>/y)

$BE_y$  Baseline Emissions in year  $y$  (t CO<sub>2</sub>/y)

$PE_y$  Project emissions in year  $y$  (t CO<sub>2</sub>/y)

$LE_y$  Leakage emissions in year  $y$  (t CO<sub>2</sub>/y)

Based on the above assessment, AENOR confirms that that:

- All assumptions and data used by the project participants are listed in the PoA-DD and CPA-DD, including their references and sources;
- All documentation used by project participant as the basis for assumptions and source of data is correctly quoted and interpreted in the PoA-DD and CPA-DD;



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- All values used in the PoA-DD and CPA-DD are considered reasonable in the context of the proposed CDM project activity;
- The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;
- All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PoA-DD and CPA-DD.

### **3.6 Additionality**

#### **3.6.1 Starting date of the Programme of Activities**

According to the final PoA-DD the starting date of the PoA, 04/11/2010, is the date of publication of the initial PoA-DD for global stakeholder consultation on the UNFCCC website. This date corresponds to the definition of starting date of a PoA included in the CDM glossary version 07.0.

During validation the methodology was changed and a new version of the POA DD was submitted for GSC. Validation team deems that the date stated in the final PoA-DD can be considered as the starting date of the PoA, thus accepted.

##### **3.6.1.1 Additionality of the Programme of Activities**

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

It has been clearly demonstrated that there is no mandatory policy or regulation in the host country enforcing the implementation of small hydropower based projects for electricity generation. This was confirmed based on the on-site interviews, the host country experience of the audit team and on the assesment of the national legislation which does not restrict or empower any authority to restrict the fuel choice.. Therefore options (ii) The mandatory policy/regulation would be systematically not enforced and that noncompliance with those requirements is widespread in the country/region, and (iii) The PoA will lead to a greater level of enforcement of the existing mandatory policy /regulation, does not apply to the PoA

The additionality argument for the PoA will be demonstrated using option (i) The proposed voluntary measure would not be implemented. The proposed PoA is a voluntary action by the coordinating/managing entity – RYCOPESA . Based on the submitted documents it is evident that this voluntary coordinated action would not be implemented in the absence of the PoA

Additionally, the Peruvian industries that choose to participate in the Programme of Activities after the signature of a specific contract with RYCOPESA will also do so voluntarily

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

- Approach 1: Micro-scale CPAs.
  - This option is applicable only for individual project activities complying with the applicability conditions in the applicable version of the "Guidelines for Demonstrating Additionality of Microscale Project Activities": Since Peru is not LDC/SIDS country, Programme activities shall be eligible under Approach 1 only if each of the independent subsystem/measure in the CPA achieves an estimated annual emission reduction equal to or less than 600 tCO<sub>2</sub>e per year and end user are households/communities/ SMEs (with the exception of CPAs implemented in special underdeveloped zone of Peru identified according to the guidelines, which will be automatically additional). The PP has proposed the definition of the International Finance Corporation (IFC)/18/, part of the World Bank Group will be used. According to IFC, SMEs are those that:
    - Number of employees < 300 employees
    - Total assets ≤ \$15,000,000
    - Total annual sales ≤ \$15,000,000

The sources has been assessed by the validation team and deemed correct and reasonable and it can be considered as an international regulation.

- Approach 2: Small-scale CPA:
  - Under this option, additionality is demonstrated based on the "Guidelines on the demonstration of additionality of small-scale project activities (version 09.0)": Investment barrier (Access to Finance); Investment Barrier (application of Investment Analysis). The investment barrier will be demonstrated based on the investment analysis Sub-step 2b, Option III. Apply benchmark analysis of the "Tool for the demonstration and assessment of additionality (version 06.0.0)"/19/. According to the Guidelines on the assessment of investment analysis /20/, The benchmark approach is suited to cases where the choice of the developer is to invest or not to invest, therefore option II is valid.

### **3.6.1.2 Additionality of a typical SSC-CPA**

The PoA-DD specifies clearly that in order to demonstrate additionality the CPA should choose between two options:

Depending on the type of CPA, this should be done taking into account different principles:

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- Micro-scale projects as CPAs shall include eligibility criteria derived from all the relevant requirements of the Guidelines for demonstrating additionality of microscale project activities"
- Small-scale projects as CPAs shall include eligibility criteria derived from all the relevant requirements of Guidelines on the demonstration of additionality of small-scale project activities..

**Approach 1: Micro-scale CPAs.**

- This option is applicable only for individual project activities complying with the applicability conditions in the applicable version of the "Guidelines for Demonstrating Additionality of Microscale Project Activities": Since Peru is not LDC/SIDS country, Programme activities shall be eligible under Approach 1 only if each of the independent subsystem/measure in the CPA achieves an estimated annual emission reduction equal to or less than 600 tCO<sub>2</sub>e per year and end user are households/communities/ SMEs (with the exception of CPAs implemented in special underdeveloped zone of Peru, which will be automatically additional). The PP has proposed the definition of the International Finance Corporation (IFC), part of the World Bank Group will be used. According to IFC, SMEs are those that:
  - Number of employees < 300 employees
  - Total assets ≤ \$15,000,000
  - Total annual sales ≤ \$15,000,000

The sources has been assessed by the validation team and deemed correct and reasonable and it can be considered as an international regulation.

**Approach 2: Small-scale CPA:**

- Under this option, additionality is demonstrated based on the "Guidelines on the demonstration of additionality of small-scale project activities": Investment barrier (Access to Finance); Investment Barrier (application of Investment Analysis). The investment barrier will be demonstrated based on the investment analysis Sub-step 2b, Option III. Apply benchmark analysis of the "Tool for the demonstration and assessment of additionality (version 06.0.0)". According to the Guidelines on the assessment of investment analysis, The benchmark approach is suited to cases where the choice of the developer is to invest or not to invest, therefore option II is valid.
- The post-tax Project IRR will be used, since it includes all in and out cash flows. According to the "Tool for the demonstration and assessment of additionality" (Version 06.0.0) option a) was used to determine the discount rate and benchmark used for the benchmark analysis.

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- (a) 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; In order to estimate an adequate discount rate to evaluate the Programme activity financial feasibility the following will be considered:
  - Government bond rates for 10 years in Peru published by the Ministry of Economy and Finance of Peru
  - Country Risk for Peru published by the Organisation for Economic Co-operation and Development (OECD).
- From the above the total benchmark value would be: Government bond rates for 10 years in Peru + Country Risk for Peru.
- Since all the investment is 100% equity, in cases like this, Equity IRR and project IRR are the same. PP could have opted for a default value benchmark from Appendix A:

	Group 1:	Group 2:	Group 3:
PERÚ	11.75 %	12.75 %	11.25 %

Above information shows that the selected benchmark is more conservative.

- The IRR benchmark of 10.125% is validated to be suitable for the project activity by AENOR's validation team in compliance with paragraph 12, Annex 5 of the EB62 report [20] and paragraph 114 (b) of the VVM version 1.2. This information is backed up by several registered projects, which use project IRR and a benchmark derived from Government bond rates, increased by a suitable risk premium to reflect the private investment. (Ahome Landfill Gas Project (6778), Santiago 2.8 MW hydroelectric project (5811), Oaxaca IV (6216)).
  - A Sensitivity Analysis will be undertaking for each Small Scale CPA. To verify the consistency of the investment analysis, a sensitivity analysis will be undertaken. Only variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues are subjected to reasonable variation (all parameters varied need not necessarily be subjected to both negative and positive variations of the same magnitude). As a general point of departure variations in the sensitivity analysis should at least cover a range of +10% and -10%, unless this is not deemed appropriate in the context of the specific project circumstances. The variation necessary in these parameters to reach the benchmark IRR will be calculated.

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### **3.7 Monitoring Plan**

#### **3.7.1 Compliance of the monitoring plan with the approved methodology**

As stated above, the PoA and CPAs use the approved methodology AMS-III.B version 16 Switching fossil fuels.

Applicability of this methodology is justified in the final PoA-DD.

Accordingly, the monitoring plan includes quantity of LPG combusted by the project as relevant parameter to be monitored.

The final PoA-DD, section E.6.3, clearly identifies the parameters to monitor in compliance with the applicable methodology:

$Q_{PJ,y}$  : Net energy output generated in the element process in the project activity situation in year y

$FC_{LPG,i,y}$  : Quantity of LPG combusted in year y in the project activity

$E_{\text{exported},PJ,y}$  : Electricity/thermal energy generated in the CPA and used by the recipient end in year y

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

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

#### **3.7.2 Implementation of the Monitoring Plan**

RYCOPESA has developed a management system, following the requirements indicated “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities” (version 02.0). RYCOPESA is responsible for its implementation.

Repsol’s Carbon Unit, the department responsible for providing the necessary advise in climate change matters to any Business Unit that are part of Repsol, will advice RYCOPESA’s Commercial staff and Technicians about some key aspects such as the assessment whether eligibility criteria included in PoA-DD are met; the development of CPA-DD, the verification of monitored data following QA/QC procedures, the development of the monitoring report, etc. The management system includes the following:

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***A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs***

RYCOPESA is responsible for managing all SSC-CPAs to be included in the proposed PoA. This will mean that those operating the SSC-CPA will be aware and will have agreed that their activity is subscribed to the proposed PoA. Therefore, the industrial clients that wish to participate in the PoA and benefit from the corresponding incentives will sign a supply contract with RYCOPESA in which they express their consent to include their activity in the Programme of Activities and will be made aware that they are participating in a climate change action Programme aiming to reduce greenhouse gas emissions.

***Training and capacity development for personnel***

RYCOPESA staff is periodically trained by Repsol's Carbon Unit technicians in CDM and PoAs rules and the requirements to be met by the future CPAs.

All the CPA staff members involved in implementing the Programme activity will be trained by RYCOPESA's commercial staff before the CPA is included under the PoA.

Specifically, client's Plant Manager, as well as the technicians responsible for control of production process, maintenance and calibration of monitoring equipment and quality system management will be trained by RYCOPESA's technicians in order to make them aware of the rules of the CDM and PoA.

***Review of inclusion of CPAs***

RYCOPESA has implemented a sequential analysis process that involves identifying potential CPAs, evaluating these by means of eligibility criteria and subsequent development and inclusion of these under the PoA.

A procedure with a description of the steps to be followed for the review of inclusion of CPAs has been defined and implemented.

***Procedures to avoid double counting***

Prior to registering a new SSC-CPA within the proposed PoA, RYCOPESA will check the CDM project database to establish whether a CDM project activity or CPA of another PoA of fuel switching has already been registered involving one specific industrial plant. This search will cover registered project activities, project activities requesting registration, project activities under review and project activities for which either a review or corrections have been requested.

For each CPA, it will be checked if the annual emission reductions in each subsystems are greater than 1% of the small scale thresholds defined by the methodology applied, which is 600 tCO<sub>2</sub>e, and de-bundling check has to be performed for that CPA. In case the de-bundling check has to be performed for a CPA, it will be done according to what the *Guidelines on assessment of de-bundling for SSC project activities*, version 3 states.

***Control process for each CPA under the PoA***

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The relevant parameters included in the monitoring plan shall be monitored and electronically recorded for each of the CPAs independently. RYCOPESA will be responsible for the management of records and data associated with each CPA in accordance with monitoring requirements stipulated in AMS-III.B (version 16)

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

The PoA will be managed following a process management model developed by the CME.

Monitoring will be carried out for each CPA independently. Parameters described in section E.7.1 of PoA-DD shall be monitored by the CPA according to the procedures and monitoring framework established in E.7.2.

To verify the data from the different CPAs, the DOE should follow the statistical sampling method described in section A.4.4.2. AENOR considers the sampling method adequate, accurate, and his design fulfill the requirements of the *Standard for sampling and surveys for CDM Project activities and Programme of activities* (version 02.0).

After the review of evidence provided by the PP, the interview and communications with PP, AENOR confirms that monitoring arrangements described in the monitoring plan are feasible within the Programme design and that the means considered for the implementation, including data management, quality and assurance control procedures, are sufficient to ensure that the emission achieved resulting from the proposed PoA can be reported ex post and verified.

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

### **3.8 Comments by Local Stakeholders**

Since the Programme of Activities will be implemented within the geographical limits of the host country, Peru, the local stakeholder consultation has been done at PoA level. A complete list of relevant stakeholders that have participated in the public information is included in section D.1 of the PoA-DD.

In order to assess the adequacy of the local stakeholder consultation, during the on-site visit the AENOR team requested the PPs not only provide evidence about the consultation process, but also to hold interviews with the local stakeholders relevant for the project activity.

Thus, during the on-site visit with PPs and stakeholders evidence was provided to the validation team of the consultation meetings [21].

By means of documents reviewed and the interviews performed, AENOR considers that the summary of the comments received during the consultation process, along with the PPs responses included in section D.2 of the PoA-DD is complete. The main conclusions of the meetings and opinions collected from questionnaires are included in the PoA-DD, section D.2. A summary of the comments received during the process is included in the section D3 of the final PoA-DD.

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### **3.9 Environmental Impacts**

Environmental Analysis is chosen to be done at PoA level.

The environmental analysis was carried out at the PoA level, since there is no negative impact caused by switching from a residual fuel oil to a lighter one that produces less greenhouse gas emissions, as well as lower emissions of other polluting gases. Therefore, no case-by-case environmental analysis is required for each CPA included in the Programme of Activities.

According to the laws/regulations of Peru [22], no environmental impact study is required for the modifications necessary in industrial facilities for their inclusion in the Programme of Activities. The industries involved already burned hydrocarbon fuels before implementing the Programme, and the production processes will not be changed compared to the initial situation. The Programme activity will only replace the fuel storage, distribution and burning system.

This issue was confirmed by the validation team during the interview held with the Peruvian environmental authority during the onsite visit.

Thus the validation team considers the environmental analysis accurate and according to local national regulations.

## **4 SPECIFIC PROGRAMME OF ACTIVITIES REQUIREMENTS**

### **4.1 Operational Management and Verification Plan**

A clear and transparent description of the operational and management arrangements have been established by the CME and stated in Section A.4.4 of the PoA-DD.

According to paragraph 19 of the Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities version 02 (EB70, Annex05); the CME has developed and implemented a Management System which has been provided to the DOE team at the time of validation. AENOR has verified that CME's management system is structured into high level management

The CPAs shall follow the operating manual and the operating manual includes (a) a clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies, (b) records of arrangements for training and capacity development for personnel, (c) procedures for technical review of inclusion of CPAs, (d) a procedure to avoid double counting, (e) records and documentation control process for each CPA under the PoA, (f) measures for continuous improvements



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of the PoA management system and (g) procedures for contractual agreement with CPA implementers. The CPA implementer shall enter into a contractual that the CPA has not and will not be registered as a CDM project activity or as CPA of another PoA, that the implementing entity is aware that the CPA will be subscribed to the present PoA and the implementing entity cedes its rights to claim and own emission reductions under the CDM to the managing entity of the present PoA (h) updating eligibility criteria. The CME will check the records for each CPA before submission to the DOE for inclusion.

Operational management and verification plan in the final PoA-DD is assessed to be appropriate for the purpose of the programme monitoring. The overall responsibility for the monitoring will be held by RYCOPESA (Managing Entity). Monitoring will be carried out for each CPA independently. Parameters described in section E.7.1 of PoA-DD shall be monitored by the CPA according to the procedures and monitoring framework established in E.7.2.

To verify the data from the different CPAs, the DOE, during the verification process, should follow a statistical sampling method described in section A.4.4.2. AENOR considers the sampling method adequate, accurate, and its design fulfils the requirements of the *Standard for sampling and surveys for CDM Project activities and Programme of activities* (version 03.0). The proposed sample size and sampling method is adequate to achieve the minimum confidence/precision requirements. AENOR has been able to reproduce the sample size calculation. The proposed sampling plan will ensure that samples are randomly selected and are representative of the population

RYCOPESA will collect the information submitted by each CPA of the PoA. All monitoring data will be stored and archived by the Managing Entity. Emission reduction calculation of each CPA will be based on data collected and analyzed by RYCOPESA. The database is confirmed as the data management system designed specifically for the PoA to ensure the data accuracy, to avoid double counting, to addressing uncertainty (QA/QC), and to manage monitoring data storage for the monitoring of all CPAs.

The arrangements are sufficient to ensure that the CME of the PoA 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 PoA and for the purpose of the programme monitoring

## **4.2 Criteria for Inclusion of SSC-CPA in the PoA**

A complete list of applicable CPA Eligibility Criteria has been set up in section A.4.2.2 of the final PoA-DD and section B.2 of the generic CPA-DD, and is deemed appropriate and sufficient.

The proposed Programme of Activities covers industries in Peru, mainly small and medium-sized, that could take advantage of a fuel switch from residual fuel oil to LPG by adapting their facilities voluntarily. The Programme activities that could be chosen for inclusion in the PoA must meet the requirements specified below, developed following the applicable requirements indicated "Standard for demonstration of

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additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (version 01.0).

The eligibility criteria are as follows:

Nº	Category ("Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" - version 01.0)	Description	Evidence to be checked at CPA inclusion
1	(a) The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA;	Each SSC-CPA must be located within the geographical boundary of Peru.	Location will be specified in the CPA-DD. <b>Evidence:</b> Statement of CME that the location is within the geographical boundary of Peru.
2	(b) Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo);	Each SSC-CPA must be identified uniquely and defined explicitly by providing geographical information and the exact date on which the credit period begins and ends;	An unique numbering or identification system for the implemented CPAs will be applied. The specific number or identification code will be included in the CPA-DD. Geographical information and the exact date on which the credit period begins and ends will be associated with this number or identification code. <b>Evidence:</b> A Programme logo with the specific number or identification code will be stuck in the equipment installed.
3		Each SSC-CPA must be neither registered as an individual CDM project activity nor included as a CPA in another registered PoA involving fuel switching;	A statement will be included in the CPA-DD in order to specify that the CPA is not part of another single CDM project activity or CPA under another PoA. <b>Evidence:</b> Check on UNFCCC website with date of access.

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4	(c) The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications;	The measure to be undertaken in this PoA (fossil fuel switch from residual fuel oil to LPG in industries), which will mainly require the replacement of the current burners designed for liquid fuels with others that can work with LPG, the fuel storage tank and feeding system, will not affect the level/type of service and the performance specifications of the single equipment (boiler, furnace, turbine, etc) included in the element process. The characteristics of the single output (such as steam, heat or electricity) produced in this single equipment will remain equivalent throughout the crediting period and will be comparable to its characteristics in the baseline.	Each SSC-CPA must be undertaken in industries that use, before the fossil fuel switch, residual fuel oil as a single energy source of the element process included in the project boundary. This fuel must be consumed in a single equipment (boiler, furnace, turbine, etc) in order to generate a single output (such as steam, heat or electricity). The fuel switch will not change the level/type of service and the performance specifications of the single equipment considered in the element process, since the only modification will be the replacement of burners. No other components of this equipment will be updated. Therefore, the characteristics of the single output (such as steam, heat or electricity) produced are expected to remain equivalent after the fuel switch. <b>Evidence:</b> LPG supply contract in which the equipment to be installed for the fossil fuel switch implementation is described.
5	(d) Conditions to check the start date of the CPA through documentary evidence;	Companies in which the Project activity will be implemented must have signed a contract for the supply of the LPG to become part of the PoA;	The date of signature of the supply contract will represent the starting date of the small-scale CPA since it is the binding decision on behalf of both parties to execute the fuel switch project. <b>Evidence:</b> LPG supply contract.
6	(e) Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs;	CPAs will implement AMS-III.B Switching fossil fuel (version 16);	The CPA-DD will be completed using AMS-III.B Switching fossil fuel (version 16) and main sections included in this document such as B.5.2. Ex-ante calculation of emission reductions or B.6.1. Description of the monitoring plan will be developed according the requirements included in this methodology. <b>Evidence:</b> CPA-DD

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7		The fuel switch carried out in the CPA must be implemented in a single element process or may include several element processes within the facility;	<p>A detailed description of the element process will be included in the CPA-DD. In those element processes that will be part of the PoA, a single energy source (residual fuel oil in the baseline and LPG after the implementation of the Programme activity) is consumed in a single equipment (boiler, furnace, turbine, etc) in order to generate a single output (such as steam, heat or electricity).</p> <p><b>Evidence:</b> Historical information, if available, on the use of residual fuel oil and the consumption of LPG monitored after CPA implementation; a description of the equipment in which the fossil fuel is consumed; and a description of the energy output generated and its use in the productive process.</p>
8		Multiple fossil fuel switching in a single element process cannot be carried out in a CPA;	<p>CPAs will carry out a single fuel switching from residual fuel oil (R6) to LPG.</p> <p><b>Evidence:</b> Historical information, if available, on the use of residual fuel oil. LPG supply contract and the consumption of LPG monitored after CPA implementation.</p>
9		CPAs will involve new facilities or retrofit/replacement of existing installations;	<p>The CPAs to be included in this PoA will be implemented in new facilities or existing installations. A description of the type of facilities in which the fuel switch will be carried out will be included in the CPA-DD. Additionally, the LPG supply contract will always include a description of the equipment to be installed.</p> <p><b>Evidence:</b> CPA-DD and LPG supply contract.</p>
10		Each SSC-CPA primarily aims at reducing emissions through fuel switching. If the fuel switching is part of an initiative focused primarily on energy efficiency, the CPA cannot be included in the PoA;	<p>The CPAs include the installation of new LPG burners, storage tanks and feeding systems at the CPA's industrial plant. This represents a technological benefit because the use of LPG as a fuel provides for better flame control but it does not significantly improve the energy efficiency of the element process. If the fuel switching was part of an initiative focused primarily on energy efficiency, a more ambitious initiative would be developed and additional equipment should be installed.</p> <p><b>Evidence:</b> LPG supply contract in which the equipment to be installed for the fossil fuel switch implementation is described.</p>

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11		CPAs for activities that propose switch from fossil fuel to renewable biomass, biofuel or renewable energy cannot be included in the PoA;	CPAs will carry out a single fuel switching from residual fuel oil (R6) to LPG. <b>Evidence:</b> LPG supply contract and the consumption of LPG monitored after CPA implementation.
12		CPAs for activities involving the use of waste gas cannot be included in the PoA;	CPAs will carry out a single fuel switching from residual fuel oil (R6) to LPG. <b>Evidence:</b> LPG supply contract and the consumption of LPG monitored after CPA implementation.
13		CPAs involving emission reductions on account of shift from use of a grid electricity or electricity exported to a grid cannot be included in the PoA;	CPAs will carry out a single fuel switching from residual fuel oil (R6) to LPG. <b>Evidence:</b> LPG supply contract and the consumption of LPG monitored after CPA implementation.
14		It must be possible to directly measure and record the energy output and consumption within the project boundary. In case of CPAs in which the estimated annual emission reductions are equal to or less than 600 tCO <sub>2</sub> e per year per element process it must be possible to directly measure and record at least the energy consumption in the element process;	A procedure with a description of the steps to be followed for the review of inclusion of CPAs has been defined and implemented as a part of the PoA's management system. As indicated in this procedure, an assessment of the monitoring plan requirements will be done before including the CPAs in the PoA. It will be assessed if the measurement equipment necessary to comply with the monitoring plan is operational and if it would be necessary to install additional equipment. <b>Evidence:</b> Internal assessment for the inclusion of CPAs.
15		The energy output (heat, steam or electricity) produced under the CPA will be for on-site captive use and/or export to other facilities included in the project boundary;	The energy output (heat, steam or electricity) produced under the CPA to be included in the PoA will mainly be for on-site captive use. In those cases in which the energy output is exported to other facilities, these will be included in the project boundary and a contract between the supplier and consumer(s) of the energy will be entered into force specifying that only the facility generating the energy is the owner of the CERs generated. <b>Evidence:</b> A description of the type of facilities in which the fuel switch will be carried out will be included in the CPA-DD and CER ownership contract when energy output is exported
16		In those CPAs in which the energy produced by the project activity is delivered to another facility, or facilities, within the project boundary, a contract between the supplier (CPA) and consumer(s) of the energy must be entered into force specifying that only the facility generating the energy (CPA) will claim emission reductions from the energy displacement;	In those cases in which the energy produced by the CPA is delivered to another facility a contract between the supplier and consumer(s) of the energy will be entered into force specifying that only the facility generating the energy is the owner of the CERs generated. <b>Evidence:</b> CER ownership contract

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17		CPAs involving an integrated change of the element process where the fuel switch is implemented cannot be included in the PoA;	<p>The operational conditions, the type of raw material processed, the type or quality of the products manufactured, etc of the CPA will remain equivalent throughout the crediting period and will be comparable to the operational conditions, the type of raw material processed, the quality of the products manufactured, etc in the baseline. The CPAs include the installation of new LPG burners, storage tanks and feeding systems at the CPA's industrial plant. That will not affect the production process and it is expected and therefore the characteristics of the CPA's process will remain equivalent.</p> <p><b>Evidence:</b> Check during verification process that the operational conditions, the type of raw material processed, the type or quality of the products manufactured, etc have not been modified. In those cases in which CPAs have a quality management system or their products are produced following specific standards, these can be used as an example of evidence to assess this eligibility criterion.</p>
18		CPAs developed in existing facilities must have historical information on the use of fossil fuels and the plant energy output from at least three years prior to project implementation. For facilities that are less than three years old, all historical data shall be available (a minimum of one year data would be required). For existing facilities having no historical data/information on baseline parameters such as efficiency, energy consumption and output, the baseline parameters can be determined using a performance test/measurement campaign prior to the implementation of the project activity. In CPAs with an estimated annual emission reductions equal to or less than 600 tCO <sub>2</sub> e per year per element process a simplified approach for calculating emission reductions based on the amount of fossil fuel consumed in the project activity, may be used and no historical information on the use of fossil fuels and the plant energy output is required.	<p><b>Evidence:</b> In case of CPAs with an estimated annual emission reductions more than 600 tCO<sub>2</sub>e per year per element process, the historical information on the use of residual fuel oil and the plant energy output (for existing facilities having no historical data/information on baseline parameters such as efficiency, energy consumption and output, determined using a performance test/measurement campaign prior to the implementation of the project activity).</p> <p>In case of CPAs with an estimated annual emission reductions equal to or less than 600 tCO<sub>2</sub>e per year per element process, the expected consumption of LPG.</p>

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19	(f) The conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality;	<p>Additionality shall be demonstrated by means of one of the two following approaches:</p> <p><b>Approach 1)</b> Micro-scale CPAs are additional if: a) each of the independent subsystem/measure in the CPA achieves an estimated annual emission reduction equal to or less than 600 tCO<sub>2</sub>e per year and b) end user are households/communities/ SMEs (with the exception of CPAs implemented in special underdeveloped zone of Peru, which will be automatically additional).</p> <p><b>Approach 2)</b> Small-scale CPAs are additional if, following the Guidelines on the demonstration of additionality of small-scale project activities), the investment analysis shows that the Programme activity is not financially attractive (the IRR obtained from the Programme activity does not exceed the benchmark IRR), and the sensitivity analysis indicates that it is unlikely to be financially attractive compared to the benchmark under any reasonable variations in the assumptions.</p>	<p>An assessment on whether the CPAs can be considered as Micro-scale CPAs will be done prior to its inclusion in the PoA. In case of Small-scale CPAs, additionality assessment will be specified in the CPA-DD.</p> <p><b>Evidence:</b> Estimated emission reductions and enterprise indicators determined by the International Finance Corporation (IFC) to define SMEs (number of employees, total assets and total annual sales). Investment analysis and data sources used (invoices, supply contract, etc).</p>
20	(i) Where applicable, target group (e.g. domestic/commercial/industrial, rural/urban, grid-connected/off-grid) and distribution mechanisms (e.g. direct installation);	<p>The target group in this PoA is:</p> <ol style="list-style-type: none"> <li>1) Companies in Peru, mainly small and medium-sized part of different industrial sectors (for example: Food processing, Cooking farm produce, Smelting and metal processing, etc).</li> <li>2) Industries that include either new facilities or retrofit/replacement of existing installations.</li> <li>3) Small-scale or Micro-scale projects. In the first case, the emissions reductions achieved must be equal to or less than 60.000 tCO<sub>2</sub>e per year. In case of Micro-scale projects the emissions reductions achieved must be equal to or less than 600 tCO<sub>2</sub>e per year and the industries in which the fuel switch is implemented are households/communities/SMEs<sup>1</sup> (two out of three must be met: ≤300 employees, ≤\$15,000,000 total assets, ≤\$15,000,000 total annual sales).</li> </ol>	<p><b>Evidence:</b> Geographical location of the CPA, economic sector in which is included and other enterprise indicators to evaluate if the company can be considered as a Micro-scale or Small-scale CDM project (Emissions reductions, Number of employees, Total assets and Total annual sales).</p>

<sup>1</sup> Peruvian national legislation defines micro and small enterprises but there is no an official description of SMEs. For this reason, the definition of the International Finance Corporation (IFC), part of the World Bank Group will be used.

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21	(k) Where applicable, the conditions that ensure that every CPA in aggregate meets the small-scale or microscale threshold criteria and remains within those thresholds throughout the crediting period of the CPA;	CPAs must meet the eligibility criteria for small-scale or micro-scale CDM project activities;	The CPA will remain under small-scale or micro-scale CDM project activities throughout the crediting period of the CPA. <b>Evidence:</b> Estimated emission reductions when evaluating the inclusion of the CPA under the PoA and monitored emissions reductions once the CPA is implemented.
22	(l) Where applicable, the requirements for the debundling check, in case CPAs belong to small-scale (SSC) or microscale project categories.	The SSC-CPAs to be included in the PoA must not be de-bundled from another CDM Programme Activity, nor from a large-scale CDM project.	In order to avoid registering a SSC-CPA that is in fact a de-bundled component of another CPA or CDM project, a de-bundling check will be done. <b>Evidence:</b> For each CPA, it will be checked if the annual emission reductions in each subsystems are greater than 1% of the small scale thresholds defined by the methodology applied, which is 600 tCO <sub>2</sub> e, and de-bundling check has to be performed for that CPA. Additionally, for each CPA, it will be checked if within 1 km of the boundary of the proposed SSC-CPA at the closest point, there is any activity having the same activity implementer as the proposed SSC-CPA, or having a coordinating/managing entity which also manages a large scale PoA of the same technology/measure. For each CPA deemed to be a debundled component, it will be checked if the total size of such CPA combined with a registered SSC-CPA or registered CDM does exceed the limits for small scale CDM.

The requirements described in "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (version 02.0) are included in applicability criteria. The requirements described in 16 (g), (h), and (j) of the Standard are not applicable to this PoA.

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

As indicated in the "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (version 02.0), if the version of methodology applied by the PoA is revised or replaced, subsequent to being placed on hold, the CME will update the eligibility criteria to the requirements of the revised or new methodology with immediate effect.



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A new version of the PoA-DD and generic CPA-DD containing updated eligibility criteria validated by a DOE will be submitted to the Board for approval.

- a) Once changes have been approved by the Board, the inclusion of all new CPAs will be based on the updated eligibility criteria applying the new generic CPA-DD;
- b) CPAs that were included before the methodology was put on hold will apply the revised version of the generic CPA-DD only at the time of the renewal of the crediting period.

No action will be implemented if the version of methodologies applied by the PoA is revised without being placed on hold or is withdrawn for the purpose of inclusion in a consolidated methodology, unless otherwise indicated in the respective report of the meeting of the Board.

AENOR considers the provisions for updating the eligibility criteria in case the methodology applied by the PoA is revised or replaced to be complete and adjusted to the needs of the PoA and the requirements of the CDM rules.

#### 4.3 Provisions in case of withdrawal or held of the applied methodology

Provisions regarding the revisions of the CPAs in case the methodology is put on hold or withdrawn have been established in section E.6 in accordance with the "Procedures for registration of a Programme of Activities as a single CDM project activity and issuance of certified emission reductions for a Programme of Activities" version 04.1 as follows:

- If applied methodology is put on hold or withdrawn, for any reason other than for the purpose of inclusion in a consolidated methodology, no new CPAs shall be included to the PoA.
- If applied methodology, subsequent to being placed on hold or withdrawn, is revised or replaced by inclusion in a consolidated methodology, the PoA shall be revised accordingly. The changes will be documented in a new version of the PoA and validated by a DOE and approved by the Board. In case the methodology is only revised without being put on hold or withdrawn, these changes are not required and will not be conducted.
- In case of changes in the PoA and after approval by the Board, the inclusion of new CPAs will follow the latest version of the CDM-CPA-DD;
- In cases of withdrawal or held of the methodology, those CPAs included before the withdrawal will apply the latest version of the generic CDM-CPA-DD at the time of the renewal of the crediting period.

AENOR considers the provisions regarding the revisions of the CPAs in case the methodology is put on hold or withdrawn to be complete and adjusted to the needs of the PoA and the requirements of the CDM rules.

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## **5 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS**

According to Decision 4/CMP.1, the validator shall make the PoA-DD, specific CPA-DD and generic CPA-DD publicly available and receive comments on the validation requirements from parties, stakeholders and UNFCCC accredited NGOs within 30 days, and make them publicly available.

The PoA-DD, and the CPA-DD were published for Global Stakeholder Consultation (GSC) in UNFCCC website on 04/11/2010. These documents were originally published adopting AMS-III.AN methodology. Due to the fact the PoA changed to adopt AMS-III.B methodology, PoA-DDs were republished for GSC on 30/03/2012. No comments were received.

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## **6 VALIDATION OPINION**

AENOR has performed a validation of the Programme of Activities "**Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru**". The validation was performed on the basis of UNFCCC criteria and host country criteria, as well as criteria given for the Programmes of Activities to provide for consistent operations, monitoring and reporting.

The validation consisted of the following three phases: i) a desk review of the programme design, the baseline and the monitoring plans; ii) follow-up interviews with project stakeholders; iii) the resolution of outstanding issues and the issuance of the final validation report and opinion. In the course of the validation process, several corrective actions and clarifications requests were raised; all have been successfully closed.

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

The conclusions can be summarised in detail as follows:

- The PoA is in line with all relevant host country criteria of Peruvian DNA, with the Letter of Approval from Peru and with all relevant UNFCCC requirements for Programme of Activities. The LoA from Peru is dated on 14/03/2011.
- The operational and management plan established by the coordinating entity is suitable for the PoA validated.
- The baseline has been appropriately identified as per the applied methodology AMS-III.B, version 16.
- Eligibility criteria in the PoA-DD are sufficient to ensure that all CPAs would comply with the CDM requirements applicable to the PoA. These requirements include the means of demonstrating the additionality of the CPA and the applicability of the applied methodology.
- The programme's additionality is sufficiently justified in the PoA-DD.
- The monitoring plan and the Operational and Management Plan are transparent and adequate.
- The calculation of validated CPA emission reductions has been carried out in a transparent and conservative manner, following the approved methodology AMS-III.B, version 16.
- Information on the local stakeholders' consultation by the project participants prior to submitting the PoA for validation is sufficiently provided in the PoA-DD.
- All information has been also consistently applied in the generic CPA-DD form.

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

The validation has been performed using a risk based approach, as described above. The only purpose of this report is its use during the registration process as part of the CDM project cycle. Hence, AENOR cannot be held liable by any party for decisions made or not made based on the validation opinion, which would go beyond the purpose.

05/12/2012



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Luis Robles Olmos

Chief Validator

05/12/2012



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José Luis Tejera Oliver

Authorized person

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### 7 CAR, CLARIFICATIONS AND FORWARD ACTION REQUESTS

FINDING	Nº 1		
<b>Classification</b>	<b>CAR</b> <input checked="" type="checkbox"/>	<b>CL</b> <input type="checkbox"/>	<b>FAR</b> <input type="checkbox"/>
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Letter of Approval of the Peruvian DNA has to be provided to the AENOR team.		
<b>PP RESPONSE #1</b>	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	Letter of Approval of the Peruvian DNA has been provided to the validation team.		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
<b>DOE Assessment #1</b> <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	LoA is correct. <b>This CAR is closed</b>		
<b>PP RESPONSE #2</b>	<i>This section shall be filled by the PP.</i>		
<i>Corrective action</i>			
<i>Evidences proposed</i>			
<b>DOE Assessment #2</b>			
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<b>CAR CLOSED</b> <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

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FINDING	Nº 2		
<b>Classification</b>	<b>CAR</b> <input checked="" type="checkbox"/>	<b>CL</b> <input type="checkbox"/>	<b>FAR</b> <input type="checkbox"/>
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The modalities of communication (MoC) shall be provided to the validation team		
<b>PP RESPONSE #1</b>	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	Modalities of communication (MoC) have been provided to the validation team.		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
<b>DOE Assessment #1</b> <i>The assessment shal encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	The document Modalities of Communications has been provided and is correct. <b>This CAR is closed</b>		
<b>PP RESPONSE #2</b>	<i>This section shall be filled by the PP.</i>		
<i>Corrective action</i>			
<i>Evidences proposed</i>			
<b>DOE Assessment #2</b>			
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<b>CAR CLOSED</b> <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

## VALIDATION REPORT

"Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru"

FINDING	Nº 3		
<b>Classification</b>	<b>CAR</b> <input checked="" type="checkbox"/>	<b>CL</b> <input type="checkbox"/>	<b>FAR</b> <input type="checkbox"/>
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Additionality of The PoA demonstrated in section Section A4.3 has to be in line with current version of 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		
<b>PP RESPONSE #1</b>	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	The PDD has been updated in order to demonstrate the additionality of the PoA.		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
<b>DOE Assessment #1</b> <i>The assessment shal encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	The PDD has been updated, CAR is closed		
<b>PP RESPONSE #2</b>	<i>This section shall be filled by the PP.</i>		
<i>Corrective action</i>			
<i>Evidences proposed</i>			
<b>DOE Assessment #2</b>			
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<b>CAR CLOSED</b> <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

## VALIDATION REPORT

"Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru"

FINDING	Nº 4		
<b>Classification</b>	<b>CAR</b> <input checked="" type="checkbox"/>	<b>CL</b> <input type="checkbox"/>	<b>FAR</b> <input type="checkbox"/>
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The date when the baseline and monitoring was determined is not consistent with the new publishing of PDDs		
<b>PP RESPONSE #1</b>	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	The date included in the PoA-DD was incorrect. The baseline and monitoring methodology was determined several months after the publication of this PoA in UNFCCC website using AMS.III.AN and before the commencement of the new validation period using AMS.III.B. The actual date when the baseline and monitoring methodology was determined is 19/03/2012.		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
<b>DOE Assessment #1</b> <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	The last version of the PoA-DD is correctly updated. <b>This CAR is closed.</b>		
<b>PP RESPONSE #2</b>	<i>This section shall be filled by the PP.</i>		
<i>Corrective action</i>			
<i>Evidences proposed</i>			
<b>DOE Assessment #2</b>			
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<b>CAR CLOSED</b> <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	



## VALIDATION REPORT

"Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru"

FINDING	N° 1		
<b>Classification</b>	<b>CAR</b> <input type="checkbox"/>	<b>CL</b> <input checked="" type="checkbox"/>	<b>FAR</b> <input type="checkbox"/>
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	<p>The project proponent shall clarify the nature, responsibilities and tasks of the so called "Repsol's Carbon Unit" in what respect with the management plan, quality assurance and quality control procedures</p>		
<b>PP RESPONSE #1</b>	<p><i>This section shall be filled by the PP.</i></p>		
<p><i>It shall address the corrective action taken in details</i></p>	<p>Repsol's Carbon Unit is part of the Company's Environmental and Safety Division. This department is responsible for providing the necessary advise to any Business Unit in climate change matters. Carbon Unit's main tasks/responsibilities are: 1) to provide training in climate change, energy efficiency and GHG emission reduction initiatives; and 2) to advise Business Units in the interpretation and application of the CDM rules to the projects they are developing.</p> <p>Business Units that are part of Repsol have the ultimate responsibility for the development and management of the CDM projects they implement.</p> <p>In case of this PoA, RYCOPESA is responsible for the development and implementation of the management system. RYCOPESA has the overall responsibility for the inclusion of the CPAs and the application of the monitoring plan. Therefore, quality assurance and quality control procedures will be carried out by RYCOPESA's Commercial staff and Technicians.</p> <p>Repsol's Carbon Unit will advice RYCOPESA's Commercial staff and Technicians about:</p> <ul style="list-style-type: none"> <li>• Compliance with eligibility criteria included in PoA-DD and demonstration of CPA's additionality</li> <li>• Development of CPA-DD</li> <li>• Checking of monitored data following QA/QC procedures</li> <li>• Verifying and recording the data</li> </ul>		

## VALIDATION REPORT

"Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru"

	<ul style="list-style-type: none"> <li>• Calculations of the emission reductions</li> <li>• Development of the Monitoring report</li> </ul> <p>PoA-DD and CPA-DD have been modified in order to clarify these tasks and responsibilities.</p>
<i>It shall provide and indentified the evidences proposed (if applicable)</i>	
<b>DOE Assessment #1</b> <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	<p>Clarifications have been provided and they are deemed to be correct, PoA-DD has been updated accordingly. <b>This CL is closed.</b></p>
<b>PP RESPONSE #2</b>	<i>This section shall be filled by the PP.</i>
<i>Corrective action</i>	
<i>Evidences proposed</i>	
<b>DOE Assessment #2</b>	
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<div> <div>CL CLOSED <input checked="" type="checkbox"/></div> <div>To be checked during the first periodic verification <input type="checkbox"/></div> </div>

## VALIDATION REPORT

"Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru"

FINDING	Nº 2		
<b>Classification</b>	<b>CAR</b> <input type="checkbox"/>	<b>CL</b> <input checked="" type="checkbox"/>	<b>FAR</b> <input type="checkbox"/>
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The starting date described in the PoA DD should be clarified		
<b>PP RESPONSE #1</b>	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	PoA DD has been updated to clearly state the starting date		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
<b>DOE Assessment #1</b> <i>The assessment shal encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Clarifications have been provided and they are deemed to be correct, PoA-DD has been updated accordingly. <b>This CL is closed.</b>		
<b>PP RESPONSE #2</b>	<i>This section shall be filled by the PP.</i>		
<i>Corrective action</i>			
<i>Evidences proposed</i>			
<b>DOE Assessment #2</b>			
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<b>CL CLOSED</b> <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

## VALIDATION REPORT

"Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru"

## 8 REFERENCES

Documents provided by the project proponents that relate directly to the GHG components of the project. These have been used as direct sources of evidence for the determination conclusions.

Background documents related to the design and/or methodologies employed in the design or other reference documents..

Ref	Document Name		Author/Competent Authority
1	Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru. CDM SSC-PoA-DD (version 1)		Project Proponent
2	Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru. CDM SSC-PoA-DD (version 3)		Project Proponent
3	Project activity to switch from residual fuel oil to LPG at Agroindustrias AIB food processing plant in Peru. CPA_001_AIB CPA-DD (version 3)		Project Proponent
4	CDM SSC-generic-CPA-DD		Project Proponent
5	Approved Methodology: AMS-III.B: "Switching fossil fuels" version 16		CDM – Executive Board
6	ACM0009: "Consolidated baseline and monitoring methodology for fuel switching from coal or petroleum fuel to natural gas" Version 3.2		CDM – Executive Board
7	Guidelines for demonstrating additionality of microscale project activities, version 04		CDM – Executive Board
8	Guidelines on the demonstration of additionality of small-scale project activities. V 9.0.0.		CDM – Executive Board
9	Procedures for Registration of a Programme of Activities as a single CDM project activity and issuance of Certified Emission Reductions for a Programme of Activities, version 04.1		CDM – Executive Board
10	Guidelines on the Assessment of Investment Analysis, version 05		CDM – Executive Board
11	CDM Validation and Verification Manual version 01.2		CDM – Executive Board
12	Letter of Approval from the DNA of Peru	14/03/2011	Peruvian DNA

## VALIDATION REPORT

"Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru"

Ref	Document Name		Author/Competent Authority
13	Specific instruction for the Validation, Verification and Certification of Clean Development Mechanism (CDM) Project Activities (IE-DTC-039)		AENOR
14	Emission reductions calculation spreadsheets		Project Proponent
15	IEA Statistics, Oil in Peru	2006	International Energy Agency
16	National Survey of Boilers (ENC)	2000	Ministry of Industry, Tourism, Integration and International Trade Negotiations
17	Fuel and Energy Production Emission Factors	2007	MEET Project: Methodologies for Estimating Air Pollutant Emissions from Transport (European Commission)
18	Interpretation Note on Small and Medium Enterprises and Environmental and Social Risk Management	2012	International Finance Corporation (IFC)
19	"Tool for the demonstration and assessment of additionality (version 06.0.0)		CDM – Executive Board
20	The Guidelines on the assessment of investment analysis		CDM – Executive Board
21	Documentation used in the stakeholders consultation		Project Proponent
22	General Environmental Law (No. 28.611)	2005	Peru
23	Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (version 02.1)	2012	CDM – Executive Board
24	Standard for sampling and surveys for CDM Project activities and Programme of activities (version 03.0)	2012	CDM – Executive Board

**ANNEX 1: CDM VALIDATION PROTOCOL**

VALIDATION PROTOCOL FOR  
PROGRAMME OF ACTIVITIES:

"Programme of activities to switch from residual fuel oil to LPG in  
manufacturing industries in Peru"

PROJECT PARTICIPANT:

Repsol YPF Comercial del Perú S.A.  
(RYCOPESA)

Validation Type	
<input checked="" type="checkbox"/> Validation of a Programme of Activities	
Validation Team:	
Luis Robles	Chief Validator and Technical expert
Pablo Taboada Utrera	validator
José Antonio Gesto	Validator
Version of this Validation Protocol: 04	Date: 05/12/2012

PoA Title: "Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru"

Date of Completion: 05/12/2012

CHECKLIST TOPIC / QUESTION	MoU.	COMMENTS	Draft Conclusion	Final Conclusion
<b>A. GENERAL DESCRIPTION OF PROGRAMME OF ACTIVITIES</b>				
<b>A.1. Approval</b>				
A.1.1 Have all the parties involved in the Programme of Activities provided a written Letter of Approval of the Programme of Activities?	DR I	<b>CAR 1: Letter of Approval of the Peruvian DNA has to be provided to the validation team.</b>  Letter of Approval of the Peruvian DNA has been provided to the validation team. This CAR is closed	<b>CAR 1</b>	OK
A.1.2 Do the Letters of Approval confirm that: <ul style="list-style-type: none"> <li>The Party is a Party to the Kyoto Protocol</li> <li>The participation is voluntary</li> <li>The CDM Programme of Activities contribute to the sustainable development (host Party)</li> <li>The title of the Programme of Activities is precise and coincides with the title included in the POA-DD?</li> </ul>	DR I	The LoA is correct and complete.	<b>CAR 1</b>	OK
A.1.3 Has the Letter of Approval be obtained from the project participants or directly from the DNA? In case that it has been obtained from the Project participant, how has been assessed its authenticity?	DR I	The Letter of Approval be obtained from the project participant and is deemed to be correct.	<b>CAR 1</b>	OK
A.1.4. Does the coordinating entity of the PoA identify measures to ensure that all CPAs under its PoA are neither registered as an individual CDM project activity nor included in another registered PoA and that the CPA is subscribed to the PoA? (Double accounting methodology)	DR I	As it is established in section A.4.4.1 of the POA-DD, the coordinating entity will have a database with the information of the new CPA that will be incorporated, to verify whether a CDM project activity or CPA of another PoA has already been registered.	OK	OK

PoA Title: "Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru"

Date of Completion: 05/12/2012

A.2. Project participants				
A.2.1. Is the form required for the indication of project participants correctly applied in the POA-DD?	DR	Yes, the correct form has been applied in the PDD, section A.3.	OK	OK
A.2.2. Is the participation of all project participants approved by a Party to the Kyoto Protocol?	DR	Yes. Peru has approved the participation of the project participant	<b>CAR 1</b>	OK
A.2.3. Is all information on participants / Parties provided in consistency with details provided by further chapters of the POA-DD (in particular annex 1)?	DR	Yes, Annex 1 is in accordance with Section A.3 of the PDD.	OK	OK
A.2.4. Have parties participating in the CDM POA designated a national authority and a coordinating/managing entity for the POA?	DR I	YES. Peru has a DNA. RYCOPESA is the CME	<b>CAR 1</b>	OK
A.2.5. Is the authority and responsibility of the coordinating/management entity clearly described?	I	Yes. The coordinating entity is RYCOPESA The role and main activities of the Coordinating Entity are clearly described. This issue was confirmed during the on site visit.	OK	OK
A.2.6. Is the Coordinating Agency a project participant authorized by all participating host countries DNAs involved and identified in the modalities of communication as the entity which communicates with the Board?	DR I	The CME is authorized by Peru. <b>CAR 2 The modalities of communication (MoC) shall be provided to the validation team</b> The document Modalities of Communications has been provided and is correct. <b>This CAR is closed</b>	<b>CARs 1, 2</b>	OK
A.3. Programme Design Document				



PoA Title: "Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru"

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A.3.1. Does the used programme title clearly enable to identify the unique CDM Programme of Activities? Is it consistent in all section of the POA-DD and in all documents?	DR I	Yes, the title is "Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru". The title is consistent in the entire document.	OK	OK
A.3.2. Is there any indication concerning the version number and the date of the version?	D	Yes, there are indications concerning the version number and the date of the version	OK	OK
A.3.3. Is this consistent with the time line of the project's history?	DR	Yes, documents and dates are consistent.	OK	OK
A.3.4. Is the POA-DD prepared in accordance with the latest template and guidance from the CDM Executive Board?	DR	The POA-DD prepared in accordance with the template and guidance in force from the CDM Executive Board (CDM SSC-PoA-DD version 01).	OK	OK
A.3.5. Has the POA-DD been published for Global Stakeholder Consultation (GSC) in the UNFCCC webpage?	DR	Yes, the PoA-DD, and the CPA-DD were published for Global Stakeholder Consultation (GSC) in UNFCCC website on 04/11/2010. These documents were originally published adopting AMS-III.AN methodology. Due to the fact the PoA changed to adopt AMS-III.B methodology, PoA-DDs were republished for GSC on 30/03/2012.	OK	OK
A.3.6. Have there been any comments during the GSC process?	DR	No comments have been received	OK	OK
A.3.7. Have them correctly addressed by the validation team?	DR	No comments have been received	OK	OK
<b>A.4. Description of the Programme of Activities</b> The POA-DD (section A.2) shall contain a clear description of the Programme of Activities that provides the reader with a clear understanding of the precise nature of the Programme of Activities.				
A.4.1. Is the description delivering a transparent overview of the Programme of Activities?	DR I	Yes, the description is delivering a transparent overview of the Programme of Activities	OK	OK

PoA Title: "Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru"

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A.4.2. What proofs are available demonstrating that the programme description is in compliance with the actual situation or planning?	DR I	Official documentation regarding the development of the programme has been provided to the determination team	OK	OK
A.4.3. Is the information provided by these proofs consistent with the information provided by the POA-DD?	DR	Yes, the information provided is consistent.	OK	OK
A.4.4. Has the validation team conducted a physical site inspection to confirm the description of the POA-DD? If not, justify.	I	Yes. The validation team has carried out a validation visit on 13 to 15 December 2010. During the on site visit the description of the programme of activities was assessed.	OK	OK
<b>A.5. Technical description of the Programme of Activities</b> The POA-DD (section A.4) shall contain a clear description of the Programme of Activities that provides the reader a clear understanding of the technical aspects of its implementation.				
<i>A.5.1. Location of the Programme of Activities</i>				
A.5.1.1. Is the definition of the boundary for the POA established in terms of a geographical area within which all CPAs will be implemented?	DR I	Yes, the Programme of Activities will be implemented within the geographical limits of the host country, Peru.	OK	OK
A.5.1.2 Do the requirement that all applicable national and/or sectoral policies and regulations of the host country within the boundaries chosen taken into account?	DR I	Yes. The boundaries of the Programme have been well established, and all sectoral policies and regulations of the host country have been taken into account	OK	OK
A.5.1.3. Are the eligibility criteria for inclusion of a CPA in the POA clearly defined?	DR	Eligibility criteria for inclusion of a CPA in the POA are clearly described in PoA-DD Section A.4.2.2.	OK	OK
<i>A.5.2. Category of the Programme of Activities</i>				

PoA Title: "Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru"

Date of Completion: 05/12/2012

A.5.2.1. To which category(ies) does the Programme of Activities belong to? Is this category correctly identified and indicated?	DR I	The activities in the Programme are Type III "Other project activities that both reduce anthropogenic emissions by sources", Category III.B "Switching fossil fuels". Pursuant to annex A of the Kyoto Protocol, the Programme belongs to sectoral scope 1 "Energy industries"	OK	OK
A.5.2.2. Does the Programme qualify as a small scale CDM Programme of Activities as defined in paragraph 6 (c) of decision 3/CMP.1 on the modalities and procedures for the CDM?	DR	Yes the POA qualify as a small scale CDM Programme of Activities.  Only CPAs meeting the eligibility criteria for small-scale CDM project activities may be included in the PoA.	OK	OK
A.5.2.3. Does proposed POA confirm to one of the project categories defined for small scale CDM project activities?	DR	Yes	OK	OK
A.5.2.3. In the case of a small scale Programme of Activities, is it justified that the CPAs are not a debundled component of a larger CPAs?	DR I	Yes, the SSC-CPAs included in the POA will not be a de-bundled component from another CDM Programme Activity (CPA) or large scale CDM project activity.  As it is established in section A.4.4.1 of the POA-DD, the coordinating entity will follow guidance provided by the "Guidelines on Assessment of De-bundling for SSC Project Activities", version 3. So, for each CPA of the POA it will be checked according to what the Guidelines states.	OK	OK
<i>A.5.3. Technology to be employed by the Programme of Activities</i>				

PoA Title: "Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru"

Date of Completion: 05/12/2012

A.5.3.1. Does the description of the technology to be applied provide sufficient and transparent input/information to evaluate its impact on the greenhouse gas balance? And, is the explanation how the programme will reduce greenhouse gas emission transparent and suitable?	DR I	<p>The programme of activities consists of switching residual fuel oil, traditionally consumed by small and medium industrial clients in Peru, for a lower carbon content fossil fuel such as LPG.</p> <p>Technically, the replacement of fuels with LPG in small industries requires replacing the current burners designed for liquid fuels, the fuel storage tanks and feeding system. This modification will not increase the life of the equipment, nor significantly change the production process. No other components of the equipment are to be updated.</p> <p>The main characteristics of the programme of activities are defined in the POA-DD Section A.4.2. The impact on the greenhouse gas balance is positive.</p> <p>The explanation on how the project will reduce greenhouse gas emission is transparent and suitable.</p>	OK	OK
A.5.3.2. Does the programme require extensive initial training and maintenance efforts in order to be carried out as scheduled during the life POA period? If so, does the POA make provisions for meeting training and maintenance needs?	DR I	Yes. The POA makes provisions for meeting training and maintenance needs, as is included in the monitoring plan section E.7	OK	OK
A.5.3.3. Is a schedule available for the implementation of the POA and are there any risks for delays?	DR I	There is no schedule for the implementation of the PoA. The starting date of the PoA is 04/11/2010	OK	OK
<i>A.5.4. Estimated amount of emission reductions over the chosen crediting period</i>				

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A.5.4.1. Is the form required for the indication of projected emission reductions correctly applied?	DR I	N/A. That issue is applicable to the CPA-DD	N/A	
A.5.4.2. Are the figures provided consistent with other data presented in the POA-DD?	DR I	N/A See A.5.4.1	N/A	
<i>A.5.5. Public funding of the Programme of Activities</i>				
A.5.5.1. In case of public funding from Annex I Parties is it confirmed that such funding does not result in a diversion of official development assistance?	DR I	No public financing will be used in this PoA and related CPAs.	OK	OK
A.5.5.2. Is all information provided consistent with the details given in remaining chapters of the POA-DD (in particular annex 2)	DR I	Yes, the information provided is consistent.	OK	OK
<b>B. BASELINE AND MONITORING METHODOLOGY</b>				
<b>B.1. Title and reference of the approved baseline and monitoring methodology</b>				
B.1.1. Are reference number, version number, and title of the approved baseline and monitoring methodology clearly indicated?	DR	Yes. The methodology indicated is "Switching fossil fuels" AMS-III.B, version 16  The reference number, version number and title of the methodology is clearly indicated in the PoA-DD.	OK	OK

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B.1.2. Is the applied version the most recent one and / or is this version still applicable?	DR	Yes, the applied version is still applicable	OK	OK
B.1.3. Does the POA-DD refer to the corresponding tools with their latest approved versions?	DR	Yes, the POA-DD refers to the corresponding tools, with their latest approved versions.	OK	OK
B.1.4. Is the baseline methodology applicable to Programmes of Activities?	DR I	Yes, the baseline methodology is applicable to Programmes of Activities	OK	OK
<b>B.2. Applicability of the selected methodology to the Programme of Activities</b>				
B.2.1. Are the chosen tools considered applicable in accordance with the design of the POA and the provisions of the applied methodology?	DR	Yes.	OK	OK
B.2.2. Is the choice of the methodology correctly justified by the POA-DD and is the POA in conformance with all applicability criteria of the applied methodology?	DR	The justification of the choice of the methodology is included in section E2 of PoA-DD. All of them are clearly explained.	OK	OK
B.2.3. Are provisions regarding the updating of the CPAs in case of held or withdraw the methodology be taken into account in the POA-DD?	DR	Yes, provisions regarding the updating of the CPAs in case of held or withdraw the methodology are included in section E.6.1 of PoA-DD.	OK	OK
Fill in the required amount of sub checklists for applicability criteria as given by the methodology applied and comment at least every line answered with "No"				

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<p>B.2.4. Criterion 1:</p> <p>This methodology comprises fossil fuel switching in industrial, residential, commercial, and institutional or electricity generation applications.</p>	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	OK	OK
Applicability checklist	Yes/No											
Criterion discussed in the POA-DD?	Yes											
Evidence provided?	Yes											
Compliance verified?	Yes											
<p>B.2.5. Criterion 2:</p> <p>Fuel switch may be in a single element process or may include several element processes within the facility. Multiple fossil fuel switching in an element process however is not covered under this methodology.</p>	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	OK	OK
Applicability checklist	Yes/No											
Criterion discussed in the POA-DD?	Yes											
Evidence provided?	Yes											
Compliance verified?	Yes											
<p>B.2.6. Criterion 3:</p> <p>This methodology is applicable for new facilities as well as for retrofit or replacement of existing installations.</p>		<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	OK	OK
Applicability checklist	Yes/No											
Criterion discussed in the POA-DD?	Yes											
Evidence provided?	Yes											
Compliance verified?	Yes											
<p>B.2.7. Criterion 4:</p> <p>Fuel switching may also result in energy efficiency improvements. If the project activity primarily aims at reducing emissions through fuel switching, it falls into this methodology. If fuel switching is part of a project activity focused primarily</p>	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	OK	OK				
Applicability checklist	Yes/No											
Criterion discussed in the POA-DD?	Yes											

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on energy efficiency, the project activity falls under a Type II methodology			Evidence provided?	Yes										
			Compliance verified?	Yes										
<p>B.2.8. Criterion 5:</p> <p>New facilities (Greenfield projects) and project activities involving capacity additions compared to the baseline scenario are only eligible if they comply with the related and relevant requirements in the general guidelines to SSC CDM methodologies. The requirements concerning demonstration of the remaining lifetime of the replaced equipment shall be met as described in the general guidelines to SSC CDM methodologies. If the remaining lifetime of the affected systems increases due to the project activity, the crediting period shall be limited to the estimated remaining lifetime, i.e. the time when the affected systems would have been replaced in the absence of the project activity</p>	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>			Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	OK	OK
Applicability checklist	Yes/No													
Criterion discussed in the POA-DD?	Yes													
Evidence provided?	Yes													
Compliance verified?	Yes													
<p>B.2.9. Criterion 6:</p> <p>This methodology is not applicable to project activities that propose switch from fossil fuel use in the baseline to renewable biomass, biofuel or renewable energy in the project scenario. A relevant Type I methodology shall be used for such project activities that generate renewable energy displacing fossil fuel use. This methodology is also not applicable to project activities involving the use of waste gas; these project activities might be eligible under AMS-III.Q.</p>	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>No</td></tr><tr><td>Compliance verified?</td><td>No</td></tr></table>			Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	Evidence provided?	No	Compliance verified?	No	OK	OK
Applicability checklist	Yes/No													
Criterion discussed in the POA-DD?	Yes													
Evidence provided?	No													
Compliance verified?	No													
<p>B.2.10. Criterion 7:</p> <p>The facility may involve grid connected elemental processes however this methodology does not cover emission reductions</p>	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr></table>			Applicability checklist	Yes/No	Ok	OK						
Applicability checklist	Yes/No													



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on account of shift from use of a grid electricity or electricity exported to a grid.			Criterion discussed in the POA-DD?	Yes										
			Evidence provided?	Yes										
			Compliance verified?	No										
B.2.11. Criterion 8: This category is applicable to project activities where it is possible to directly measure and record the energy use/output (e.g. heat, steam and electricity) and consumption (e.g. fossil fuel) within the project boundary. In case of project activities that meet the criteria under paragraph 17 below, this methodology is applicable only where it is possible to directly measure and record at least the energy consumption in the element process (e.g. fossil fuel input).	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>No</td></tr></table>			Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	Evidence provided?	Yes	Compliance verified?	No	Ok	Ok
Applicability checklist	Yes/No													
Criterion discussed in the POA-DD?	Yes													
Evidence provided?	Yes													
Compliance verified?	No													
B.2.12. Criterion 9: Heat, steam or electricity produced under the project activity shall be for on-site captive use and/or export to other facilities included in the project boundary. In case of electricity generation plants, the generated electricity may also be supplied to users via mini/isolated grid(s) system exclusively supplied by fossil fuel units.	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>No</td></tr><tr><td>Compliance verified?</td><td>No</td></tr></table>			Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	Evidence provided?	No	Compliance verified?	No	Ok	OK
Applicability checklist	Yes/No													
Criterion discussed in the POA-DD?	Yes													
Evidence provided?	No													
Compliance verified?	No													
B.2.13. Criterion 10: In case energy produced by the project activity is delivered to another facility, or facilities, within the project boundary, a contract between the supplier and consumer(s) of the energy will have to be entered into specifying that only the facility generating the energy can claim emission reductions from the	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr></table>			Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	OK	OK				
Applicability checklist	Yes/No													
Criterion discussed in the POA-DD?	Yes													

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energy displacement.			Evidence provided?	Yes										
			Compliance verified?	Yes										
B.2.14. Criterion 11:  Regulations do not constrain the facility from using the energy sources cited in paragraph 1 before or after the fuel switch. Regulations do not require the use of low carbon energy source (e.g. natural gas or any other fuel) in the element processes.	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>			Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	OK	OK
Applicability checklist	Yes/No													
Criterion discussed in the POA-DD?	Yes													
Evidence provided?	Yes													
Compliance verified?	Yes													
B.2.15. Criterion 12:  The project activity does not result in integrated process change. The purpose is to exclude measures that affect other characteristics of the process besides switch of energy sources e.g. operational conditions, type of raw material processed, use of non-energy additives, change in type or quality of products manufactured etc.	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>			Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	OK	OK
Applicability checklist	Yes/No													
Criterion discussed in the POA-DD?	Yes													
Evidence provided?	Yes													
Compliance verified?	Yes													
B.2.16. Criterion 13:  Measures are limited to those that result in emission reductions of less than or equal to 60 kt CO2 equivalent annually	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr></table>			Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	Evidence provided?	Yes	OK	OK		
Applicability checklist	Yes/No													
Criterion discussed in the POA-DD?	Yes													
Evidence provided?	Yes													

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			Compliance verified?	Yes										
B.2.17. Criterion 14:  The project boundary is the physical, geographical site where the switching of energy source takes place. It includes all installations, processes or equipment affected by the switching. In case energy produced by the project activity is delivered to another facility, the boundary also extends to the industrial, commercial facilities consuming energy generated by the system	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>No</td></tr><tr><td>Compliance verified?</td><td>No</td></tr></table>			Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	Evidence provided?	No	Compliance verified?	No	OK	OK
Applicability checklist	Yes/No													
Criterion discussed in the POA-DD?	Yes													
Evidence provided?	No													
Compliance verified?	No													
B.2.18. Criterion 15:  In case of existing facilities, historical information (detailed records) on the use of fossil fuels and the energy output (e.g. heat, steam or electricity) in the element process from at least three years prior to project implementation shall be used in the baseline calculations, e.g. information on coal use and heat output by a district heating plant, diesel use and steam generated by an industrial plant, liquid fuel oil use and electricity generated by a generating unit (records of fuel used and output can be used in lieu of actual collecting baseline validation data). For facilities that are less than three years old, all historical data shall be available (a minimum of one year data would be required)	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>			Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	OK	OK
Applicability checklist	Yes/No													
Criterion discussed in the POA-DD?	Yes													
Evidence provided?	Yes													
Compliance verified?	Yes													
B.2.19. Criterion 16:  For existing facilities having no historical data/information on baseline parameters such as efficiency, energy consumption and output (e.g. the available data is not reliable due to various factors such as the use of imprecise or non-calibrated measuring equipment), the baseline parameters can be determined using a performance test/measurement campaign	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr></table>			Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	OK	OK				
Applicability checklist	Yes/No													
Criterion discussed in the POA-DD?	Yes													

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to be carried out prior to the implementation of the project activity. The project proponent may follow the relevant provisions from the Tool to determine baseline efficiency of thermal and electricity systems. In the case of project activities that export to other facilities within the project boundary, historical data from the recipient plants is also required		<table><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Evidence provided?	Yes	Compliance verified?	Yes						
Evidence provided?	Yes											
Compliance verified?	Yes											
B.2.20. Criterion 17:  In case of project activities where the estimated annual emission reductions of each of the element processes are equal to or less than 600 tCO2e per year per element process an alternative approach may be used to calculate baseline emissions as per paragraph 21 using equation 3 instead of applying equation 1.	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Evidence provided?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the POA-DD?	Yes	Evidence provided?	Yes	Compliance verified?	Yes	OK	OK
Applicability checklist	Yes/No											
Criterion discussed in the POA-DD?	Yes											
Evidence provided?	Yes											
Compliance verified?	Yes											
B.3. Description of the Project Boundary												
B.3.1 Are all the sources and gases included in the boundary of the Programme of Activities (baseline scenario, project scenario and leakage) in accordance with the applied methodology?	DR	Yes, all the sources and gases included in the boundary of the Programme of Activities (baseline scenario, project scenario and leakage) are in accordance with the applied methodology	OK	OK								
B.3.2. Are the inclusion or exclusion of the sources of gases correctly justified?	DR	Yes	OK	OK								
B.3.3. Do the spatial and technological boundaries as verified on-site comply with the discussion provided by the POA-DD?	DR	Yes. The geographical boundaries of the PoA are the geographical limits of the host country, Peru. The CPA boundary is the physical, geographical site where the switching of energy source takes place. It includes all	OK	OK								

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		installations, processes or equipment affected by the switching.  During the on site visit the boundaries were verified.		
B.3.4. In case of grid connected electricity POAs, is the relevant grid correctly identified in accordance with EB guidance and the underlying methodology?	DR	N/A	N/A	N/A
<b>B.4. Description of the baseline scenario identification</b>				
B.4.1. Is the baseline scenario clearly described?	DR I	The baseline has been determined to be the current practice in industry of consuming residual fuel oil for process heating.	OK	OK
<b>B.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered CDM Programme of Activities (assessment and demonstration of additionality):</b>				
B.5.1. Is the PoA additionality assessed according to current versions of :  <ul style="list-style-type: none"> <li>Applicable methodology</li> <li>Tool used to demonstrate the Additionality</li> <li>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</li> </ul>	DR I	<p>According Section A4.3. of the PoA-DD: The additionality of the Programme of Activities has been proven by using the "Tool for the demonstration and assessment of additionality".</p> <p><b>CAR 3:</b></p> <p><b>Additionality of The PoA demonstrated in section Section A4.3 has to be in line with current version of 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</b></p> <p>PoA additionality has been proved according to the UNFCCC requirements.</p>	<b>CAR 3</b>	OK

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		CAR is solved		
<i>B.5.2. Additionality of PoA</i>				
B.5.2.1 Has it been demonstrated that the programme is a voluntary coordinated action that would not be implemented in the absence of CDM?	DR I	Yes, It been demonstrated that the programme is a voluntary coordinated action that would not be implemented in the absence of CDM	OK	OK
B.5.2.2. If the programme is implementing a mandatory policy/regulation, has it been demonstrated whether the policy/regulation is not being enforced? If it is enforced, has it been demonstrated that the programme will lead to a higher level of enforcement?	DR I	The programme is not implementing a mandatory policy/regulation,	NA	NA
B.5.2.3. Are all assumptions stated in a transparent and conservative manner?	DR	Yes, all assumptions have been stated in a transparent and conservative manner	OK	OK
B.5.2.4 Is sufficient evidence provided to support the relevance of the arguments made?	DR	Yes, validation team deems that the evidences provided support the relevance of the arguments made	OK	OK
B.5.2.5. Is evidence provided that CDM has been considered seriously in the decision to proceed with the Programme of Activities (CDM decision before project start) in accordance with CDM requirements?	DR I	The starting date of the POA is the same day the DOE sent PoA-DD and CPA-DD to be published on the UNFCCC website for the very first time. Both documents were published on 4/11/2010. These documents were originally published adopting AMS-III.AN methodology. Due to the fact the PoA changed to adopt AMS-III.B methodology, PoA-DDs were republished for GSC on 30/03/2012.	OK	OK

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<i>B.5.3. Additionality of CPAs</i>				
B.5.3.1. Is the approach described for demonstrating additionality of a CPA in accordance with the using the current versions of the procedure provided?	DR I	Yes	OK	OK
B.5.3.2. Does the PoA define the type of information which is to be provided for each CPA to ensure the adequate demonstration of additionality?	DR I	Yes the information to be used during the demonstration of additionality of the CPA has been provided in section E.5 of the PoA DD	OK	OK
B.5.3.3. Is the additionality of a typical CPA demonstrated?	DR I	Criteria for demonstration of additionality of the CPA has been included in the POADD, but the PoA-DD does not include demonstration of additionality of a typical CPA	OK	OK
B.5.3.4. Is sufficient evidence provided to support the relevance of the arguments made?	DR I	Yes, validation team deems that the evidences provided support the relevance of the arguments made	OK	OK
<b>B.6. Emissions reductions</b>				
<i>B.6.1. Explanation of methodological choices</i>				
B.6.1.1. Is it explained how the procedures provided in the methodology are applied by the proposed Programme of Activities?	DR	Yes. Section E.6 of PoA-DD includes a description of how procedures are applied.	OK	OK
B.6.1.2. Is every selection of options offered by the methodology correctly justified and is this justification in line	DR	Yes. All the options selected are justified.	OK	OK

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with the situation verified on-site?				
B.6.1.3. Are the formulae required for the determination of emissions reductions correctly presented and used? ( <i>Open excel, trazability of data, etc</i> )	DR I	Yes. All the formulae are correctly presented and used.	OK	OK
B.6.1.4 Are all the data and assumptions listed in the POA-DD and are appropriate and calculations result in a conservative estimate of emission reductions?	DR	Yes, all the data and assumptions listed in the POA-DD are appropriate. Emission reduction calculations are made at CPA level.	OK	OK
B.6.1.5. Are the formulae required for the determination of emission reductions correctly presented?	DR	Yes	OK	OK
<b>B.6.2. Data and parameters that are available at validation</b>				
B.6.2.1. Is the list of parameters presented in chapter E.6.3 considered to be complete with regard to the requirements of the applied methodology?	DR	Yes, the list of parameters presented in chapter E.6.3 is considered to be complete	OK	OK
B.6.2.2. Are all the data derived from official data sources or replicable records and have been correctly quoted?	DR	Yes, all the data are correctly quoted	OK	OK
<b>B.6.3 Calculation of GHG Emission Reductions – Baseline Emissions</b>				
<i>It is assessed whether the baseline emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified.</i>				



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B.6.3.1 Are the calculations documented according to the approved methodology and in a complete and transparent manner?	DR I	Calculations are documented only on a theoretical manner due the fact this is a PoA-DD protocol. Calculations shall be assessed in the CPA-DD protocol	OK	OK
B.6.3.2. Have conservative assumptions been used when calculating the baseline emissions?	DR I	Calculations are documented only on a theoretical manner due the fact this is a PoA-DD protocol. Calculations shall be assessed in the CPA-DD protocol	OK	OK
B.6.3.3 Are uncertainties in the baseline emission estimates properly addressed?	DR I	Calculations are documented only on a theoretical manner due the fact this is a PoA-DD protocol. Calculations shall be assessed in the CPA-DD protocol	OK	OK
B.6.3.4. Is additional background information on baseline data provided in Annex 3 of the POA-DD? Is this information consistent with data presented by other sections of the POA-DD?	DR I	Yes, the information is consistent.	OK	OK
<b>B.6.4 Calculation of GHG Emission Reductions – Project Emissions</b> <i>It is assessed whether the project emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified.</i>				
B.6.4.1 Are the calculations documented according to the approved methodology and in a complete and transparent manner?	DR I	Calculations are documented only on a theoretical manner due the fact this is a PoA-DD protocol. Calculations shall be assessed in the CPA-DD protocol	OK	OK
B.6.4.2. Have conservative assumptions been used when calculating the project emissions?	DR I	Calculations are documented only on a theoretical manner due the fact this is a PoA-DD protocol. Calculations shall be assessed in the CPA-DD protocol	OK	OK

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B.6.4.3 Are uncertainties in the project emission estimates properly addressed?	DR I	Calculations are documented only on a theoretical manner due the fact this is a PoA-DD protocol. Calculations shall be assessed in the CPA-DD protocol	OK	OK
<i>B.6.5. Calculation of GHG Emission Reductions – Leakage</i> <i>It is assessed whether leakage emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified.</i>				
B.6.5.1 Are the leakage calculations documented according to the approved methodology and in a complete and transparent manner?	DR	Calculations are documented only on a theoretical manner due the fact this is a PoA-DD protocol. Calculations shall be assessed in the CPA-DD protocol	OK	OK
B.6.5.2. Have conservative assumptions been used when calculating the leakage emissions?	DR I	Calculations are documented only on a theoretical manner due the fact this is a PoA-DD protocol. Calculations shall be assessed in the CPA-DD protocol	OK	OK
B.6.5.3. Are uncertainties in the leakage emission estimates properly addressed?	DR I	Calculations are documented only on a theoretical manner due the fact this is a PoA-DD protocol. Calculations shall be assessed in the CPA-DD protocol	OK	OK
<b>B.7. Application of the monitoring methodology and description of the monitoring plan</b>				
<i>B.7.1. Description of the monitoring plan</i>				
B.7.1.1 Is the monitoring plan documented according to the approved methodology and relevant tools and in a complete and transparent manner?	DR I	<p>The monitoring plan follows the approved methodology AMS III-B (ver 16) and relevant tools</p> <p><b>CL 1: The project proponent shall clarify the nature, responsibilities and tasks of the so called "Repsol's Carbon Unit" in what respect with the management plan, quality assurance and quality control procedures</b></p>	<b>CL 1</b>	OK

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		Clarifications have been provided and they are deemed to be correct, PoA-DD has been updated accordingly. <b>This CL is closed.</b>		
B.7.1.2. Does the monitoring methodology provide a consistent approach in the context of all parameters to be monitored and further information provided in the POA-DD? Are the monitoring provisions and data parameters that a CPA has to apply correctly described?	DR	Yes, the monitoring methodology provides a consistent approach in the context of all parameters to be monitored. All parameters are correctly described.	<b>CL1</b>	OK
B.7.1.3. Is the proposed sampling methodology used by the DOE for verification correctly described?	DR	Yes, a statistical sampling methodology is described in PoA-DD section A.4.4.2	OK	OK
B.7.1.4. In case of no sampling methodology would be used; the system used to assure that no double counting occurs and that the status of verification can be determined anytime for each CPA is transparently described?	DR	N/A.		
B.7.1.5. Are the provisions made for archiving Programme of Activities emission data sufficient to enable later verification?	DR	Yes	<b>CL1</b>	OK
B.7.1.6. Does the monitoring plan provide a clear description of the organization structure involved in monitoring activities and their responsibilities?	DR	Yes	<b>CL1</b>	OK
B.7.1.7. If applicable: Does annex 4 provide useful information enabling a better understanding of the envisioned monitoring	DR	Yes	<b>CL1</b>	OK

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provisions?				
B.7.1.8. Is the registration, monitoring, measurement and reporting procedure defined?	DR	Yes	<b>Cl1</b>	OK
<i>B.7.2 Compliance of the monitoring plan with the approved methodology</i>				
B.7.2.1 Is the list of parameters considered to be complete with regard to the requirements of the applied methodology? Are all of them clearly described in the monitoring plan and in accordance with the methodology and tools?	DR	A list of parameters is described accordingly to methodology	OK	OK
B.7.2.2. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the emission reductions within the project boundary during the crediting period?	DR	Yes, provisions for the collection and archiving of all relevant data are included in the monitoring plan	OK	OK
<i>B.7.3 Implementation of the Monitoring Plan</i>				
B.7.3.1 Do the means of monitoring of each of the parameters included in the plan complies with the requirements of the methodology?	DR	Yes	OK	OK
B.7.3.2. Is the measurement equipment described and deemed	DR	Yes, the measurement equipment is described adequately.	OK	OK

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appropriate?				
B.7.3.3. Are procedures identified for maintenance of monitoring equipment and installations? Are provisions regarding the calibration intervals included in the monitoring plan?	DR I	Yes, all procedures and provisions for calibration are identified in the monitoring plan.	OK	OK
B.7.3.4. Is the measurement accuracy addressed and deemed appropriate? Are procedures in place on how to deal with erroneous measurements or lack of data?	DR I	Yes,	OK	OK
B.7.3.5. A record keeping system for each CPA under the POA is forecasted?	DR I	Yes	OK	OK
B.7.3.6. Is the monitoring Plan sufficient to ensure the verification of a proper implementation of the monitoring plan?	DR I	Yes, the Monitoring Plan is deemed to be adequate.	OK	OK
B.7.3.7. Are procedures identified to ensure that those operating the CPAs are aware and have agreed that their activity is being subscribed to the POA?	DR I	Yes, a specific contract will be signed between the PoA coordinating entity and each CPA.	OK	OK
<b>B.8. Date of completion of the application of the baseline study and monitoring methodology and the name of the responsible person(s)/entity(ies)</b>				

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B.8.1. Is there any indication of a date when the baseline and monitoring was determined?	DR I	Yes. The baseline study and the monitoring methodology were determined on 14 October 2010 <b>CAR 4: The date when the baseline and monitoring was determined is not consistent with the new publishing of PDDs</b> The last version of the PoA-DD is correctly updated to 19/03/2012. <b>This CAR is closed.</b>	<b>CAR 4</b>	OK
B.8.2. Is this consistent with the time line of the POA-DD history?	DR I	The date is consistent with the time line of the POA-DD history.	<b>CAR 4</b>	OK
B.8.3. Is the information on the person(s)/entity(ies) responsible for the application of the baseline and monitoring methodology provided consistent with the actual situation?	DR I	Yes. During the on site visit, it was confirmed the participation of the mentioned technicians and institution.	OK	OK
B.8.4. Is information provided whether this person / entity is also considered a project participant?	DR	Yes	OK	OK
<b>C. DURATION OF THE PROGRAMME OF ACTIVITIES / CREDITING PERIOD</b>				
<b>C.1. Duration of the Programme of Activities</b>				
C.1.1. Are the POA starting date and operational lifetime clearly defined and reasonable?	DR I	<b>CL 2: The starting date described in the PoA DD should be clarified</b> The starting date of the POA is the same day the DOE published on the UNFCCC website for the very first time. Both documents were published on 4/11/2010. These documents were originally published adopting AMS-III.AN methodology. Due to the fact the PoA changed to adopt AMS-III.B methodology, PoA-DDs were republished for GSC on 30/03/2012. This starting date corresponds to the definition of start date for a PoA	<b>CL 2</b>	OK

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		included in current version of the CDM glossary. <b>CL is closed</b> -		
<b>D. ENVIRONMENTAL IMPACTS</b>				
<b>D.1. Documentation on the analysis of the environmental impacts, including transboundary impacts</b>				
D.1.1. Is the environment analysis undertaken at POA level? In negative case, is this issue correctly described and reflected in the CDM-POA-DD?	DR I	Yes, the environment analysis is undertaken at POA level	OK	OK
D.1.2. Has the analysis of the environmental impacts of the Programme of Activities been sufficiently described in the POA-DD?	DR	Yes, in section C.2. References have been assessed by the validation team.	OK	OK
D.1.3. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?	DR	No. There are not requirements for an EIA due the nature of the PoA	OK	OK
D.1.4. Will the Programme create any adverse environmental effects? Have they identified as significant?	DR	No negative impacts will occur as a consequence of the implementation of the PoA.	OK	OK
D.1.5. Are transboundary environmental impacts identified in the analysis?	DR	No transboundary negative impacts will occur as a consequence of the implementation of the PoA.	OK	OK

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<b>D.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party.</b>				
D.2.1. Have the identified environmental impacts been addressed in the programme design sufficiently?	DR	N/A. No significant environmental impacts have been identified.	OK	OK
D.2.2. Does the project comply with any other environmental legislation in the host country?	DR	There is no additional legislation affecting this PoA.	OK	OK
<b>E. STAKEHOLDERS' COMMENTS</b>				
<b>E.1. Brief description how comments by local stakeholders have been invited and compiled</b>				
E.1.1. Is the stakeholder's consultation process undertaken at POA level? In negative case, is this issue correctly described and reflected in the CDM-POA-DD?	DR I	Local stakeholder consultation is done at PoA level. This issue is reflected in the PoA-DD	OK	OK
E.1.2. Have relevant stakeholders been consulted? Is the exact date of the consultation process included in the POA-DD	DR I	Yes, relevant stakeholders have been consulted. Dates are included in PoA-DD.	OK	OK
E.1.3. Have appropriate media been used to invite comments by local stakeholders?	DR I	Yes. Personal invitations were sent by mail. The letters included different information about CDM and the Programme	OK	OK
E.1.4. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder	DR I	No stakeholder consultation process is required by regulations/laws in Peru for this kind of Programs	OK	OK



**Validation Protocol**

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consultation process been carried out in accordance with such regulations/laws?				
E.1.5. Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?	DR I	Yes.	OK	OK
<b>E.2. Summary of the comments received</b>				
E.2.1. Is a summary of the stakeholder comments received provided?	DR	Yes	OK	OK
<b>E.3. Report on how due account was taken of any comments received</b>				
E.3.1. Has due account been taken of any stakeholder comments received?	DR	Yes.	OK	OK

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

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**ANNEX 2 CERTIFICATES OF QUALIFICATION VALIDATION and technical review TEAM**

**AENOR** Asociación Española de  
Normalización y Certificación

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**CERTIFICATE OF QUALIFICATION**

**Subject:** Validation and Technical Review Team for "Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru"

Madrid, 24<sup>th</sup> July 2012

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

**Name:** **Luis Robles Olmos**

CDM Chief Validator: Yes

CDM Validator: Yes

CDM Chief Verifier: N/A

CDM Verifier: N/A

Technical Expert: Yes

Technical areas related with the project activity:

TA1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar (COMPLEX)



José Luis TEJERA OLIVER  
CDM Operational Director

PoA Title: "Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru"

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**Subject:** Validation and Technical Review Team for "Programme of activities to switch from residual fuel oil to LPG in manufacturing industries in Peru"

Madrid, 24<sup>th</sup> July 2012

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

**Name:** **Pablo Taboada**

CDM Chief Validator: Yes

CDM Validator: Yes

CDM Chief Verifier: N/A

CDM Verifier: N/A

Technical Expert: N/A

Technical areas related with the project activity:

N/A



José Luis TEJERA OLIVER  
CDM Operational Director

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Name: **José Antonio Gesto**

CDM Chief Validator: Yes

CDM Validator: Yes

CDM Chief Verifier: N/A

CDM Verifier: N/A

Technical Expert: N/A

Technical areas related with the project activity:

N/A



José Luis TEJERA OLIVER  
CDM Operational Director

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Name: **Fernando Segarra**

CDM Chief Validator: Yes

CDM Validator: Yes

CDM Chief Verifier: N/A

CDM Verifier: N/A

Technical Expert: Yes

Technical areas related with the project activity:

TA11: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar (COMPLEX)

  
José Luis TEJERA OLIVER  
CDM Operational Director

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Name: **Marcelino Pellitero**

CDM Chief Validator: Yes

CDM Validator: Yes


CDM Chief Verifier: N/A

CDM Verifier: N/A

Technical Expert: N/A

Technical areas related with the project activity:

N/A



José Luis TEJERA OLIVER  
CDM Operational Director