



POA VALIDATION REPORT

CUIDEMOS Mexico (Campana De Uso Inteligente De Energia Mexico) - Smart Use of Energy Mexico

REPORT No. 2008-1792

REVISION No. 02

DET NORSKE VERITAS



POA VALIDATION REPORT

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Title of PoA: CUIDEMOS Mexico (Campana De Uso Inteligente De Energia Mexico) - Smart Use of Energy Mexico
Host country/ies: Mexico
Methodology: AMS-II.C
Version: 09
GHG reducing Measure/Technology: Energy efficient lighting
ER estimate:

Size

☐ Large Scale ☒ Small Scale

Validation Phases:

- ☒ Desk Review
☒ Follow up interviews
☒ Resolution of outstanding issues

Validation Status

- ☐ Corrective Actions Requested
☐ Clarifications Requested
☒ Full Approval and submission for registration
☐ Negative validation opinion

In summary, it is DNV's opinion that the PoA "CUIDEMOS Mexico (Campana De Uso Inteligente De Energia Mexico) - Smart Use of Energy Mexico" in Mexico, as described in the PoA-DD of 22 July 2009, meets all relevant UNFCCC requirements for the CDM and all relevant host Party criteria and correctly applies the baseline and monitoring methodology AMS-II.C, version 09. DNV thus requests the registration of the "CUIDEMOS Mexico (Campana De Uso Inteligente De Energia Mexico) - Smart Use of Energy Mexico" as a PoA under the CDM.

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Report title: CUIDEMOS Mexico (Campana De Uso Inteligente De Energia Mexico) - Smart Use of Energy Mexico in Mexico		
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 Climate Change

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- ☐ Limited distribution
- ☐ Unrestricted distribution



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Abbreviations

CFL	Compact fluorescent lamps
CPA	CDM programme activity
CPA-DD	CDM programme activity design document
DOE	Overseas Development Assistance
DNA	Designated National Authority
DNV	Det Norske Veritas
ODA	Official development assistance
PoA-DD	CDM rogramme of activities design document
PoA	Programme of activities
SENER	Secretaría de Energía



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1 EXECUTIVE SUMMARY – VALIDATION OPINION

Det Norske Veritas Certification AS (DNV) has performed a validation of the programme of activities (PoA) titled “CUIDEMOS Mexico (Campana De Uso Inteligente De Energia Mexico) - Smart Use of Energy Mexico” in Mexico and the PoA specific CDM-SSC-CPA-DD with generic information relevant to all CDM programme activities (CPAs) to be included in this PoA.

The validation was performed on the basis of UNFCCC criteria for programme of activities under the Clean Development Mechanism (CDM) and host Party criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The review of the project design documentation and the subsequent follow-up interviews have provided DNV with sufficient evidence to determine the fulfilment of stated criteria.

The host Party is Mexico and the Annex I Party is United Kingdom of Great Britain and Northern Ireland. Both Parties fulfil the participation criteria and have approved the project and authorized the project participants. The DNA from Mexico confirmed that the project assists in achieving sustainable development.

The programme correctly applies AMS-II.C “Demand-side energy efficiency activities for specific technologies”, version 09.

By providing energy efficient light bulbs, in the form of compact fluorescent lamps (CFLs), which require up to 80% less energy than incandescent bulbs to produce an equivalent lumen output, the programme results in reductions in electricity use for lighting and thus in the reduction of CO₂ emissions associated with electricity generation. The emission reductions are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the programme is not a likely baseline scenario. Emission reductions attributable to the programme are hence additional to any that would occur in the absence of the project activity.

Adequate monitoring procedures have been described.

In summary, it is DNV’s opinion that the PoA titled “CUIDEMOS Mexico (Campana De Uso Inteligente De Energia Mexico) - Smart Use of Energy Mexico” in Mexico, as described in the CDM-SSC-PoA-DD of 22 July 2009, meets all relevant UNFCCC requirements for a PoA under the CDM and all relevant host Party criteria and correctly applies the baseline and monitoring methodology AMS-II.C, version 09. DNV thus requests the registration of the PoA titled “CUIDEMOS Mexico (Campana De Uso Inteligente De Energia Mexico) - Smart Use of Energy Mexico” as a PoA under the CDM.



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2 INTRODUCTION

Cool nrg Mexico SRL de CV has commissioned Det Norske Veritas Certification AS (DNV) to perform a validation of the small-scale CDM Programme of Activities (PoA) with the title “CUIDEMOS Mexico (Campana De Uso Inteligente De Energia Mexico) - Smart Use of Energy Mexico” in Mexico (hereafter called “the PoA”). This report summarises the findings of the validation of the PoA and the PoA specific small-scale CDM programme activities Design Document (CDM-SSC-CPA-DD) with generic information relevant to all CDM programme activities (CPAs) to be included in this PoA. The validation was performed on the basis of UNFCCC criteria for PoAs under the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM modalities and procedures, the simplified modalities and procedures for small-scale CDM project activities, the procedures for registration of a programme of activities and the subsequent decisions by the CDM Executive Board.

2.1 Objective

The purpose of a validation is to have an independent third party assess the small-scale PoA design document (CDM-SSC-PoA-DD) and the PoA specific CDM-SSC-CPA-DD with generic information relevant to all CPAs to be included in this PoA. In particular, the eligibility criteria for inclusion and demonstration of additionality of CPAs, the programme’s baseline determination, monitoring plan, and the programme’s compliance with relevant UNFCCC and host Party criteria are validated in order to confirm that the programme design, as documented, is sound and reasonable and meets the identified criteria. Validation is a requirement for all CDM PoAs and is seen as necessary to provide assurance to stakeholders of the quality of the programme and its intended generation of certified emission reductions (CERs).

2.2 Scope

The validation scope is defined as an independent and objective review of the CDM-SSC-PoA-DD and the PoA specific CDM-SSC-CPA-DD with generic information relevant to all CPAs to be included in this PoA. The CDM-SSC-PoA-DD and CDM-SSC-CPA-DD were reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed in the Marrakech Accords, the simplified modalities and procedures for small-scale CDM project activities, the procedures for registration of a programme of activities as a single CDM project activity and the relevant decisions by the CDM Executive Board, including the approved baseline and monitoring methodology AMS-II.C.

The validation of the programme has also considered the completed CDM-SSC-CPA-DD for the CPA with the title “CUIDEMOS Mexico (Campana De Uso Inteligente De Energia Mexico) – Puebla” submitted together with the CDM-SSC-PoA-DD.

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



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3 METHODOLOGY

The validation consisted of the following three phases:

- I a desk review of the CDM-SSC-PoA-DD and the PoA specific CDM-SSC-CPA-DD with generic information relevant to all CPAs to be included in this PoA
- II follow-up interviews with programme stakeholders
- III the resolution of outstanding issues and the issuance of the final validation report and opinion.

The following sections outline each step in more detail.

3.1 Desk Review of the Programme Design Documentation

The following table lists the documentation that was reviewed during the validation:

- /1/ Cool nrg Carbon Investments Pty Ltd: CDM-SSC-PoA-DD for PoA titled “CUIDEMOS Mexico (Campana De Uso Inteligente De Energia Mexico) - Smart Use of Energy Mexico”, Version 4 dated 21 May 2008, version 6 dated 17 February 2009 and version 7 dated 22 July 2009
- /2/ Cool nrg Carbon Investments Pty Ltd: Generic CDM-SSC-CPA-DD for PoA titled “CUIDEMOS Mexico (Campana De Uso Inteligente De Energia Mexico) - Smart Use of Energy Mexico”, Version 2 dated 22 May 2008, version 4 dated 17 February 2009 and version 5 dated 22 July 2009
- /3/ Cool nrg Carbon Investments Pty Ltd: *CDM-SSC-CPA-DD for CPA titled “CUIDEMOS Mexico (Campana De Uso Inteligente De Energia Mexico) – Puebla”*, Version 3 dated 21 May 2008, version 5 dated 17 February 2009 and version 6 dated 22 July 2009
- /4/ DNA of Mexico: *Letter of Approval*; 3 July 2008
- /5/ DNA of United Kingdom of Great Britain and Northern Ireland: *Letter of Approval*; 5 August 2008
- /6/ CDM Executive Board: *AMS-II.C – Demand-side energy efficiency activities for specific technologies*, version 09
- /7/ CDM Executive Board: *Tool to calculate the emission factor for an electricity system*, version 01
- /8/ CDM Executive Board: *Validation and Verification Manual*. Version 01
- /9/ World Bank GEF: *Post-Implementation Impact Assessment, Mexico-Ilumex Project*, 2006
- /10/ SENER: *Prospectiva del Sector Electricos, 2007-2016* (<http://www.sener.gob.mx>)
- /11/ OECD/IEA: *Barriers to Technology Diffusion: The Case of Compact Fluorescent Lamps*. Information paper for the Annex 1 Expert Group on the UNFCCC, 2006
- /12/ SEMARNAT/Subsecretaria de Planeacion y Politica Ambiental: *National Climate Change Strategy*, 2007
http://www.semarnat.gob.mx/queessesemarnat/politica_ambiental/cambioclimatico/Pages



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3.2 Follow-up Interviews with Programme Stakeholders

The below listed persons have been interviewed and/or provided additional information to the presented documentation.

	Date	Name	Organization	Topic
/13/	2008-11-21	Manuel	Cool nrg Mexico	- General overview of
	2008-11-22	Rosemberg	SRL de CV	“CUIDEMOS México” Project
		Andres Rivera		- Presentation of local team
/14/	2008-11-21	<i>Several representatives of the organisation</i>	Media Council (Communication Strategy)	- Media Council’s support to “CUIDEMOS México” media campaign.
/15/	2008-11-21	<i>Several representatives of the organisation</i>	Lean Radar (Responsible for monitoring technology)	- Management and technical team behind the software - Monitoring system and reliability.
/16/	2008-11-22	<i>Several representatives of the organisation the state of Puebla</i>	Coppel (partner for CFL retail, hardware and paint retailer)	- Management, Logistics, Distribution. - Visit to distribution centre and store - General logistics for project, transportation, in-store planning, human resources - Training manual - Media efforts and Coppel internal plan for the project - Real time simulation of a CFL exchange in-store with proprietary Data Management System. - Testing of a couple of scenarios concerning the exchange of lightbulbs during project, e.g. double counting, operating hours and sample of households.
/17/	2008-11-22	<i>Several representatives of the organisation in the state of Puebla</i>	Comex (partner for CFL retail, electric appliance retailer)	- Visit distribution center and store - Training manual presentation - Human resources and logistical planning



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3.3 Resolution of Outstanding Issues

The objective of this phase of the validation was to resolve any outstanding issues which needed be clarified prior to DNV's positive conclusion on the PoA. In order to ensure transparency a validation protocol was customised for the programme. The protocol shows in a transparent manner the criteria (requirements), means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

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

The validation protocol consists of three tables. The different columns in these tables are described in the figure below. The completed validation protocol for the PoA titled "CUIDEMOS Mexico (Campana De Uso Inteligente De Energia Mexico) - Smart Use of Energy Mexico" is enclosed in Appendix A to this report.

Findings established during the validation can either be seen as a non-fulfilment of CDM PoA criteria or where a risk to the fulfilment of programme objectives is identified. Corrective action requests (CAR) are issued, where:

- i) mistakes have been made with a direct influence on programme results;
- ii) CDM and/or methodology specific requirements have not been met; or
- iii) there is a risk that the programme would not be accepted as a CDM programme of activities or that emission reductions will not be certified.

A request for clarification (CL) may be used where additional information is needed to fully clarify an issue.



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Validation Protocol Table 1: Mandatory Requirements for CDM Programme of Activities				
Requirement	Reference	Conclusion		
<i>The requirements the project must meet.</i>	<i>Gives reference to the legislation or agreement where the requirement is found.</i>	<i>This is either acceptable based on evidence provided (OK), a Corrective Action Request (CAR) due to non-compliance with stated requirements or a request for Clarification (CL) where further clarifications are needed.</i>		

Validation Protocol Table 2: Requirement checklist				
Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
<i>The various requirements in Table 2 are linked to checklist questions the programme should meet. The checklist is organised in different sections, following the logic of the PoA-DD. Each section is then further sub-divided.</i>	<i>Gives reference to documents where the answer to the checklist question or item is found.</i>	<i>Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.</i>	<i>The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.</i>	<i>This is either acceptable based on evidence provided (OK), or a corrective action request (CAR) due to non-compliance with the checklist question (See below). A request for clarification (CL) is used when the validation team has identified a need for further clarification.</i>

Validation Protocol Table 3: Resolution of Corrective Action and Clarification Requests			
Draft report clarifications and corrective action requests	Ref. to checklist question in table 2	Summary of programme owner response	Validation conclusion
<i>If the conclusions from the draft Validation are either a CAR or a CL, these should be listed in this section.</i>	<i>Reference to the checklist question number in Table 2 where the CAR or CL is explained.</i>	<i>The responses given by the programme participants during the communications with the validation team should be summarised in this section.</i>	<i>This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 2, under "Final Conclusion".</i>

Figure 1 Validation protocol tables



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3.4 Internal Quality Control

The validation report underwent a technical review before requesting registration of the programme activity. The technical review was performed by a technical reviewer qualified in accordance with DNV's qualification scheme for CDM validation and verification.

3.5 Validation Team

<i>Role/Qualification</i>	<i>Last Name</i>	<i>First Name</i>	<i>Country</i>	<i>Type of involvement</i>					
				Desk review	Site visit / Interviews	Reporting	Supervision of work	Technical review	Expert input
CDM validator / technical team leader / methodology expert	Lehmann	Michael	Norway	✓		✓	✓		
GHG auditor	Cabral	Sergio	Mexico	✓	✓				
GHG auditor	Lara	Barbara	Mexico	✓					
Technical reviewer	Chandra- shekara	Kumaras- wamy	India					✓	

The qualification of each individual validation team member is detailed in Appendix C to this report.



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4 VALIDATION FINDINGS

The findings of the validation are stated in the following sections. The validation criteria (requirements), the means of verification and the results from validating the identified criteria are documented in more detail in the validation protocol in Appendix A.

The final validation findings relate to the programme design as documented and described in the PoA design documentation dated 22 July 2009.

4.1 Participation Requirements

The PoA participants are Cool nrg Mexico SRL de CV of Mexico, and Cool nrg Carbon Investments Pty Ltd of the United Kingdom. Cool nrg Carbon Investments Pty Ltd is designated as coordinating/managing entity of the PoA. All Parties involved, i.e. Mexico and the United Kingdom of Great Britain and Northern Ireland, meet the requirements to participate in the CDM, and have provided written approval of voluntary participation in the project /4//5/.

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

4.2 Programme Design

The objective of the PoA “CUIDEMOS Mexico (Campana De Uso Inteligente De Energia Mexico) - Smart Use of Energy Mexico” is to replace incandescent light bulbs with CFLs in households, resulting in reduced electricity consumption and thus reduced emissions from generating electricity by thermal power plants.

For each replaced incandescent light bulbs the level of service of the CFL (i.e. light output) is not significantly larger or smaller (maximum $\pm 10\%$) than the baseline. CFLs provided to households will have rated power outputs of 15W and 20W (equivalent in lumen output to incandescent bulbs of at least 60W and 75W, respectively). Even in cases where the lumen output of the CFL is more than 10% above the lumen output of the replaced incandescent light bulb, this results in a conservative outcome in terms of energy savings and emission reductions.

The boundary of the PoA is Mexico. The geographical boundary of each CPA will be determined by the location of the households where CFLs are installed. Each CPA will limit participation by households belonging to a certain geographical region.

The starting date of the PoA is stated to be June 2009 when it was anticipated that the PoA would be registered. However, the start date of the first CPA will only be after the registration of the PoA, and the date when CFLs will be ordered for the first CPA to be implemented under the PoA will be considered as the start date. The length of the PoA does not exceed 28 years.

4.3 Criteria for Inclusion of CDM Programme Activities

The programme clearly establishes eligibility criteria for inclusion of a project as a CPA under the PoA. The eligibility criteria for including CPAs among others, require that no other CPA or CDM project involving the distribution and/or installation of energy efficient light bulbs is already registered or under validation in the same specific geographical area.



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4.4 Operational, Management and Verification Plan

The households included in each CPA will be recorded in a database for recording. Each participating households will have to provide their electricity bill at the time of the exchange of CFLs. This will allow the managing entity of the PoA to record the utility bill folio numbers which is a unique identification code provided to each household connected to the electricity grid of national utility CFE.

The organisations assisting in the implementation of the project, such as the retailers used to distribute CFLs, and the participating households are made aware that their activity is being subscribed to the PoA. The distribution partners have agreed with the coordinating entity that their activity is subscribed to the PoA. The information material provided by the project participants shows that households are being made aware that the use of CFL contributes to mitigate climate change.

The project participants have opted for a verification method that does not use sampling of CPAs by the verifying DOE, and each CPA is verified by the verifying DOE to ensure that no double accounting occurs and that the status of verification can be determined at any time for each CPA. Due to the choice of this option, no sampling method/procedure to be used by the verifying DOE to select CPAs for verification needs to be defined.

4.5 Baseline Determination

The PoA correctly applies the approved simplified baseline methodology for small-scale CDM project activities - AMS-II.C, version 09, entitled *Demand-side energy efficiency activities for specific technologies*.

CPAs will be defined to ensure that the aggregate energy savings by a single CPA may not exceed the equivalent of 60 GWh per year for electrical end use energy efficiency. Therefore, AMS-II.C is applicable to the project.

Three alternatives to the proposed PoA have been identified:

I. The activity could occur without being registered as a PoA through government or private sector support.

II. Individual or collaborative efforts by Mexican retailers to promote rapid uptake of energy efficient lighting technology by households in Mexico: This scenario would entail consumers to responding to increased marketing or promotion of efficient lighting alternatives and purchasing CFLs.

III. Continuation of the current situation: The baseline alternatives include either continued use of existing household lighting, or autonomous replacement of current bulbs with new technologies or measures of either the same or greater efficiency.

It is demonstrated that alternatives I and II face barriers (refer to section 4.6).

The baseline scenario is thus that incandescent bulbs would not be replaced by CFLs. This is in accordance with AMS-II.C as the emission baseline is the baseline energy consumption of equipment displaced.

The baseline determination takes into account relevant national policies and energy efficiency campaigns of key institutions such as FIDE (Trust Fund for Electrical Energy) and CONAE (National Energy Savings Commission). However, it is demonstrated based on studies by the World Bank and data published by FIDE that the penetration of CFLs in Mexico so far is mainly the result of standard retail sales, rather than government programs.



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By providing CFLs free of charge, and by using distribution hubs located in retail stores with traditionally low and medium income customers, the project proponents argue that the PoA will engage largely those households that do not currently purchase CFLs through standard retail channels, and that have previously not participated actively in government subsidised schemes. The low-income households targeted by this PoA do not use CFLs to the same extent (current penetration is estimated at approximately 2%) as higher income groups /9/. It is argued and demonstrated through studies by recognised and independent organisations that low-income households are unlikely to purchase CFLs through standard retail channels due to their high cost. Hence, the selected baseline is deemed appropriate.

4.6 Additionality

4.6.1 Additionality of the Programme

The replacement of incandescent bulbs with CFLs is not required by any law and is thus a voluntary coordinated action.

4.6.2 Additionality of Typical CPA

Through a simple cost analysis it is demonstrated that the programme is not economically attractive and thus faces investment barriers. A simple cost analysis is chosen as the organisation implementing the programme and giving away CFLs free of charge will not have any financial or economical benefits other than CDM related income. The simple costs analysis undertaken for a typical CPA as described in the generic CDM-SSC-CPA-DD for PoA and the simple cost analysis for the CPA with the title “CUIDEMOS Mexico (Campana De Uso Inteligente De Energia Mexico) – Puebla” demonstrate that without access to revenue from CERs, the CPA is not financially attractive.

Moreover, a barrier analysis has been conducted to demonstrate that the autonomous replacement of incandescent bulbs with CFLs in the baseline scenario to the same extent as by the project is not a likely baseline scenario. The barriers presented are supported by independent studies /9//11//12/.

It is sufficiently demonstrated that there are financial and planning barriers to the Mexican Government from undertaking a free CFL distribution of the same scale as that proposed under the PoA. The National Climate Change Strategy makes reference to a desire to run efficient lighting programs in the future. However, these programs will most likely take the same form as the Ilumex program conducted between 1995 and 1997 /12/. As discussed in the PoA-DDs, these programs do not involve free distribution of CFLs, but rather consumers purchasing CFLs through staged payments made in conjunction with their electricity bills. There are no specific targets, locations or timelines set for future programs of this nature. Moreover, the Federal government has specifically identified the CDM and carbon finance as a source of revenue to deliver climate change projects in collaboration with the private sector in Mexico.

It is also sufficiently demonstrated that there are barriers to individual or collaborative efforts by Mexican retailers to promote rapid uptake of energy efficient lighting technology by households in Mexico. The barriers are inadequate access to capital by low-income households and barriers due to prevailing practice. Particularly relevant for low-income households in Mexico is the fact that CFLs may be up to ten times more expensive than incandescent light bulbs. Such an upfront purchase costs represents a barrier to low-income



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households are typically emphasising the upfront costs are not considering the long-term energy savings from using CFLs.

Although Mexican government agencies, in collaboration with a range of multilateral institutions (The World Bank, GEF etc), have undertaken trials and promotions of CFL technology in the past, penetration of energy efficient lighting nationally remains relatively low. Moreover, these programs have focused on bulk purchasing by government institutions, and then on-selling to consumers at low margins, thereby reducing CFL prices to below standard retail levels. As a result, these programmes have above all resulted in penetration of CFLs in high and medium income households /9/, while the penetration of CFLs in low income households is low. The project is thus not common practise.

4.6.3 Approach for Demonstrating Additionality of CPAs

The PoA-DD lists several criteria that shall be used for demonstrating the additionality of each CPA. Among others, a simple cost analysis will be provided for each CPA to demonstrate that without CDM revenue the CPA is not financially attractive. These criteria allow for demonstrating additionality of CPAs.

4.7 Monitoring Plan

4.7.1 Methodological Choices and Equations to Be Used for Calculation of Emission Reductions of a CPA

Project and baseline emissions are determined in accordance with AMS-II.C. The procedures for calculating project emissions also specify

- the number of days after distribution of a CFL it is assume that this CFL is implemented,
- how results from monitoring the operating hours at the sample of households are extrapolated to the households where no monitoring will take place
- how results from the annual check to ensure ongoing operation at the sample of households are extrapolated to the households where no such check will take place
- how it is considered that CFLs may reach the end of their lifetime within the crediting period of a CPA.

4.7.2 Parameters Determined Ex-Ante

Each CPA aims at distributing 1 million CFLs. Sampling of households is applied to determine the operating times of CFLs and to determine the number of operational CFLs. The size of the sampling group per 1 million CFLs is determined ex-ante. There will be one sample group of 240 CFLs per 1 million CFLs distributed where the operating hours of CFLs will be monitored, and there will be a second sample group of 240 CFLs per 1 million CFLs distributed for annually checking the ongoing operation of the CFLs.

The suggested sample size represents in DNV's opinion a statistically sound sampling method/procedure. For the operating times of CFLs the project participants have calculated a standard deviation of 0.5 and a mean of 3 hours per day. This standard deviation means that the hours of use of the sample group will oscillate between 2.1 hours and 3.8 hours per day. This error margin and level of uncertainty is more conservative than that allowed under similar approved methodologies that require sampling (e.g. AMS-II.J).



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Both sample groups will be selected by random and a random selection of municipalities, suburbs within municipalities, blocks and households.

As required by AMS-II.C, the emission factor for grid electricity is determined in accordance with AMS-I.D which refers to the “Tool to calculate the emission factor for an electricity system”. The most recent data by the Mexican Ministry of Energy (Secretaría de Energía, SENER) available at the time of submission of the PoA for validation were applied. The operating margin (OM) and build margin (BM) emission coefficient were determined ex-ante based on electricity generation data, including data on electricity import/export, and the efficiency of power plants in Mexico published by SENER for 2004, 2005 and 2006 /10/.

4.7.3 Parameters Monitored Ex-Post

The monitoring plan to be applied by each CPA covers the parameters to be monitored to determine project and baseline emissions:

- i) the number of operational CFLs
- ii) the number of incandescent light bulbs replaced and their power rating
- iii) the power rating of the CFLs being exchanged for the incandescent light bulbs
- iv) the average annual operating hours of CFLs

These parameters allow determining baseline and project emissions in accordance with AMS-II.C.

In addition, the monitoring plan also comprises monitoring of independent verification of the scrapping of incandescent light bulbs collected during the distribution process and the monitoring plan was amended to monitor the implementation of the CFL collection and recycling scheme. As is required by the methodology, the coordinating entity has engaged the services of a local environmental audit firm to conduct independent verification of the scrapping of incandescent light bulbs collected during the distribution process.

Measurement equipment use to determine the average annual operating hours of CFLs are described and deemed appropriate.

4.7.4 Management System and Quality Assurance for Monitoring and Reporting

Each exchange of incandescent bulbs with CFLs at the distribution points will be recorded.

Practises and software for registering the distribution of CFLs are established. During the visits at the retail stores of Coppel and Comex, which will be responsible for distributing CFLs and recording the exchange of incandescent bulbs with CFLs, DNV observed a real time simulation of a CFL exchange in-store with the proprietary Data Management System. Moreover, DNV observed testing of the system for a couple of scenarios concerning the exchange of light bulbs, such as testing that the system avoids double counting.

4.8 Environmental Impacts

The analysis of environmental impacts is at the PoA level.

The CFLs have been approved for use in households by the Government of Mexico, and do not entail significant negative environmental impacts.

There are possible environmental impacts by the project due to an inappropriate treatment of CFLs that have reached the end of their lifetime. The coordinating entity is working in collaboration with the Ministry for Natural Resources (Semarnat) as well as with the company



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Servicios Integrales de Residuos SA de CV which specializes in the storage and recovery of hazardous materials and has proposed a program for recovery of CFLs when they reach their end of life. This program involves Servicios Integrales de Residuos SA de CV for the responsible management of CFL waste. The collaboration with Semarna as well as with Servicios Integrales de Residuos SA de CV will be monitored, so that the verifying DOE can follow-up on the implementation of these planned actions.

No EIA needs to be performed according to Mexican law for installing CFLs. However, a qualitative EIA was carried out and the results included in Annex 9 to the PoA-DD.

If waste CFLs are adequately treated and the mercury contained in CFLs is collected and recycled as planned, the project will not create any adverse environmental effects.

4.9 Comments by Local Stakeholders

A stakeholder consultation meeting was carried out in Mexico City involving relevant stakeholders, such as relevant government agencies and NGOs. A further public consultation meeting was conducted in Puebla, the location of the first CPA. Both stakeholder consultations were advertised in national newspapers.

The stakeholder consultations, the comments received and the answers given by Cool nrg are extensively documented in an annex to the PDD. The comments received by stakeholders were adequately addressed.

Further stakeholder consultations will be conducted in the relevant geographic area for each CPA.

4.10 Comments by Parties, Stakeholders and NGOs

The CDM-SSC-PoA-DD dated 21 May 2008, the PoA specific CDM-SSC-CPA-DD dated 22 May 2008 with generic information relevant to all CPAs to be included in this PoA and the CDM-SSC-CPA-DD dated 21 May 2008 for the CPA with the title “CUIDEMOS Mexico (Campana De Uso Inteligente De Energia Mexico) – Puebla” was made publicly available on the UNFCCC’s website (<http://cdm.unfccc.int/ProgrammeOfActivities/Validation/index.html>) and Parties, stakeholders and NGOs were through the CDM website invited to provide comments during a 30 days period from 16 July 2008 to 14 August 2008.

One comment was received and is given (in unedited form) in the below text box.

Comment by: David Hodge, co2balance

☐ Accredited NGO

☐ Party

☒ Stakeholder

Inserted on: 13 August 2008

Subject: Random Sample Group

Comment:

How is the sample group selected such that it is representative of the population?

How DNV has considered the comment received in its validation:

DNV raised a request for clarification with regard the process of selecting sample groups. As a result, further justifications for the selected sample size were provided and the approach represents in DNV’s opinion a statistically sound sampling method/procedure.

APPENDIX A

CDM VALIDATION PROTOCOL

Table 1 Mandatory Requirements for Clean Development Mechanism (CDM) Programmes of Activities

Requirement	Reference	Conclusion
About Parties		
1. The programme shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3.	Kyoto Protocol Art.12.2	OK
2. The programme shall assist non-Annex I Parties in contributing to the ultimate objective of the UNFCCC.	Kyoto Protocol Art.12.2.	OK
3. The programme shall have the written approval of voluntary participation from the designated national authority of each Party involved.	Kyoto Protocol Art. 12.5a, CDM Modalities and Procedures §40a	CAR-1 OK
4. The programme shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof.	Kyoto Protocol Art. 12.2, CDM Modalities and Procedures §40a	CAR-1 OK
5. In case public funding from Parties included in Annex I is used for the programme, these Parties shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of these Parties.	Decision 17/CP.7, CDM Modalities and Procedures Appendix B, § 2	No public funding involved.
6. Parties participating in the CDM shall designate a national authority for the CDM.	CDM Modalities and Procedures §29	OK
7. The host Party and the participating Annex I Party shall be a Party to the Kyoto Protocol.	CDM Modalities §30/31a	OK
8. The participating Annex I Party's assigned amount shall have been calculated and recorded.	CDM Modalities and Procedures §31b	OK
9. The participating Annex I Party shall have in place a national system for estimating GHG emissions and a national registry in accordance with Kyoto Protocol Article 5 and 7.	CDM Modalities and Procedures §31b	OK
About Design of Programme		
10. The CDM-POA-DD sets a framework for the implementation of the PoA and	PoA Procedures § 2	OK

Requirement	Reference	Conclusion
defines unambiguously a CPA under the PoA.		
11. The coordinating/managing entity shall be identified.	PoA Procedures § 2 (a)	OK
12. The boundary for the PoA in terms of a geographical area (e.g., municipality, region within a country, country or several countries) within which all CPAs included in the PoA will be implemented is defined.	PoA Procedures § 2 (b)	OK
13. Eligibility criteria are defined for inclusion of a project activity as a CPA under the PoA, which shall include criteria for demonstration of additionality, and the type and/or extent of information (e.g. criteria, indicators, variables, parameters or measurements) that shall be provided by each CPA in order to ensure its eligibility.	PoA Procedures § 2 (g)	CL OK
14. The length of the PoA is not exceeding 28 years.	PoA Procedures § 2 (h)	OK
15. The operational and management arrangements established by the coordinating/managing entity for the implementation of the PoA is described, including a description of a record keeping system for each CPA under the PoA, a system/procedure to avoid double accounting e.g. to avoid the case of including a new CPA that has been already registered either as CDM project activity or as a CPA of another PoA, the provisions to ensure that those operating the CPA are aware and have agreed that their activity is being subscribed to the PoA.	PoA Procedures § 2 (i)	CL OK
16. The proposed statistically sound sampling method/procedure to be used by DOEs for verification of the amount of emission reductions achieved by CPAs under the PoA is described. In case the coordinating/managing entity opts for a verification method that does not use sampling but verifies each CPA there is a transparent system defined and described that ensures that no double accounting occurs and that the status of verification can be determined anytime for each CPA.	PoA Procedures § 2 (k)	CAR-2 OK
About small-scale programmes of activities (if applicable)		
17. The CPAs shall meet the eligibility criteria for small scale CDM project activities set out in § 6 (c) of the Marrakech Accords.	Simplified Modalities and Procedures for Small Scale CDM Project Activities	OK

Requirement	Reference	Conclusion
	§12a,c	
About additionality		
18. Additionality of the programme as a whole is demonstrated because in the absence of the CDM (i) the proposed voluntary measure would not be implemented, or (ii) the mandatory policy/regulation would be systematically not enforced and that non-compliance with those requirements is widespread in the country/region, or (iii) that the PoA will lead to a greater level of enforcement of the existing mandatory policy /regulation.	Kyoto Protocol Art. 12.5c, CDM Modalities and Procedures §43 PoA Procedures § 2 (e)	CL OK
19. Additionality of a typical CPA is demonstrated by using the procedure provided in the baseline and monitoring methodology applied.	PoA Procedures § 2 (f)	CL OK
About application of baseline and monitoring methodology		
20. The baseline and monitoring methodology shall be previously approved by the CDM Executive Board.	CDM Modalities and Procedures §37e	OK
21. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances.	CDM Modalities and Procedures §45c,d	CL OK
22. The baseline methodology shall exclude to earn CERs for decreases in activity levels outside the project activity or due to force majeure.	CDM Modalities and Procedures §47	OK
23. The monitoring plan for a typical CPA is developed in accordance with the approved monitoring methodology, and identification of the monitoring provisions and data parameters a CPA has is to apply/monitor	PoA Procedures § 2 (j)	CAR OK
24. Provisions for monitoring, verification and reporting shall be in accordance with the modalities described in the Marrakech Accords and relevant decisions of the COP/MOP.	CDM Modalities and Procedures §37f	OK
About forecast emission reductions		
25. The emission reductions shall be real, measurable and give long-term benefits	Kyoto Protocol Art. 12.5b	OK

Requirement	Reference	Conclusion
related to the mitigation of climate change.		
About environmental impacts		
26. Documentation on the analysis of the environmental impacts of the programme activity, including transboundary impacts, shall be submitted, and, if those impacts are considered significant by the programme participants or the Host Party, an environmental impact assessment in accordance with procedures as required by the Host Party shall be carried out.	CDM Modalities and Procedures §37c	<input checked="" type="checkbox"/> Analysis at PoA level <input type="checkbox"/> Analysis at CPA level OK
About stakeholder comments		
27. Comments by local stakeholders shall be invited, a summary of these provided and how due account was taken of any comments received.	CDM Modalities and Procedures §37b	<input type="checkbox"/> Analysis at PoA level <input checked="" type="checkbox"/> Analysis at CPA level OK
28. Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for minimum 30 days, and the project design document and comments have been made publicly available.	CDM Modalities and Procedures §40	OK
Other		
29. The project design document shall be in conformance with the CDM-PoA-DD format.	CDM Modalities and Procedures Appendix B, EB Decision	OK

Table 2 Requirements Checklist

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
A. General Description of the Programme of Activities <i>The project design is assessed.</i>					
A.1. Programme Boundaries <i>Programme Boundaries are the limits and borders defining the GHG emission reduction project.</i>					
A.1.1. Are the programme's spatial boundaries (geographical) clearly defined?	/1/	DR	The boundary of the PoA is Mexico.		OK
A.1.2. Are the programme's system boundaries (components and facilities used to mitigate GHGs) clearly defined?	/1/	DR	The project will replace incandescent light bulbs with CFLs in households, resulting in reduced electricity consumption and thus reduced emissions from generating electricity by thermal power plants.		OK
A.1.3. Can each CPA under the PoA be clearly identified individually including spatial boundaries (geographical) clearly defined?	/1/	DR	The geographical boundary of each CPA will be determined by the location of the households where CFLs are installed. Each CPA will limit participation by households belonging to a certain geographical region.		OK
A.1.4. Does the programme establish eligibility criteria for inclusion of a project as a CPA under the PoA?	/1/	DR	The eligibility criteria for including CPAs are defined and among other require that no other CPA or CDM project involving the distribution and/or installation of energy efficient light bulbs is already registered or under validation in the same specific geographical area. One eligibility criteria for including CPAs is that each CPA must implement the monitoring requirements of AMS-II.C. It remains to be clarified how this represents an eligibility criterion as this is a general requirement for	CL 4	OK

* MoV = Means of Verification, DR= Document Review, I= Interview
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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			applying AMS-II.C.		
A.2. Participation Requirements <i>Referring to Part A, Annex 1 and 2 of the PoA-DD as well as the CDM glossary with respect to the terms Party, Letter of Approval, Authorization and Project Participant.</i>					
A.2.1. Which Parties and programme participants are participating in the programme?	/1/	DR	The participating Parties are Mexico as the host Party and the United Kingdom as the Annex I Party. The project participants are Cool nrg Mexico SRL de CV, authorized by Mexico, and Cool nrg Carbon Investments Pty Ltd, authorized by the United Kingdom.		OK
A.2.2. Has the coordinating/managing entity of the programme been identified?	/1/	DR	The coordinating/managing entity is Cool nrg Carbon Investments Pty Ltd.		OK
A.2.3. Have all involved Parties provided a valid and complete letter of approval and have all private/public programme participants been authorized by an involved Party?	/1/	DR	Letters of approval by the DNAs of Mexico and the United Kingdom including the authorization of the project participants Cool nrg Mexico SRL de CV and Cool nrg Carbon Investments Pty Ltd, respectively, need to be provided	CAR-1	OK
A.2.4. Do all participating Parties fulfil the participation requirements as follows: - Ratification of the Kyoto Protocol - Voluntary participation - Designated a National Authority?	/1/	DR	Both Mexico and the United Kingdom fulfil the participation requirements.		OK
A.2.5. Has it been checked that if there is public funding for the programme from Parties in Annex I, this funding shall not be a diversion of official development assistance?	/1/	DR	No public funding from Parties in Annex I is included.		OK

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
A.3. Technology to be employed <i>Validation of project technology focuses on the programme engineering, choice of technology and competence/ maintenance needs. The validator should ensure that environmentally safe and sound technology and know-how is used.</i>					
A.3.1. Does the programme design engineering reflect current good practices?	/1/	DR	The project design is the replacement of incandescent light bulbs with CFLs in households and reflects current good practises.		OK
A.3.2. Does the programme use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	/1/	DR	The project will apply CFLs produced by a reputable supplier of CFLs. The project is expected to result in a significantly more widespread use of CFLs in households.		OK
A.3.3. Does the programme make provisions for meeting training and maintenance needs?	/1/	DR	Each CPA within the PoA is also expected to include a public education component as well as targeted media campaigns to further promote the importance of energy efficiency for Mexico.		OK
A.4. Contribution to Sustainable Development <i>The project/programme's contribution to sustainable development is assessed.</i>	/1/	DR			
A.4.1. Has the host Party confirmed that the programme assists it in achieving sustainable development?	/1/	DR	Confirmation by the DNA of Mexico that the project contributes to sustainable development need to be provided.	CAR-1	OK
A.4.2. Will the programme create other environmental or social benefits than GHG emission reductions?	/1/	DR	The project will contribute to energy efficiency and the programme will create jobs.		OK
A.5. Small scale programme activity <i>It is assessed whether the project qualifies as small-</i>					

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
<i>scale CDM project activity</i>					
A.5.1. Do CPAs under the programme qualify as small scale CDM project activities as defined in paragraph 6 (c) of decision 17/CP.7 on the modalities and procedures for the CDM?	/1/	DR	CPAs will be defined to ensure that the aggregate energy savings by a single CPA may not exceed the equivalent of 60 GWh per year for electrical end use energy efficiency.		OK
A.6. Operational, management and monitoring plan for the programme					
A.6.1. Do the operational and management arrangements established by the coordinating entity include a record keeping system for each CPA under the programme?	/1/	DR I	A database for recording the households included in each CPA will be available.		OK
A.6.2. Do the operational and management arrangements established by the coordinating entity include a system/procedure to avoid including CPAs that have already been registered either as CDM project activity or as a CPA of another PoA?	/1/	DR	One of the eligibility criteria for including CPAs requires that no other CPA or CDM project involving the distribution and/or installation of energy efficient light bulbs is already registered or under validation in the same specific geographical area. Each participating households will have to provide their electricity bill at the time of the exchange of CFLs. This will allow the managing entity of the PoA to record the utility bill folio numbers which is a unique identification code provided to each household connected to the electricity grid by national utility CFE.		OK
A.6.3. Do the operational and management arrangements established by the coordinating entity include provisions to ensure that CPA implementers are aware and have agreed that	/1/	DR	It remains to be clarified whether and how the organisations assisting in the implementation of the project, such as the retailers used to distribute CFLs, and the participating	CL2	OK

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
their activity is being subscribed to the PoA?			households are made aware and agree that their activity is being subscribed to the PoA		
A.6.4. Does the monitoring plan include a description of a proposed statistically sound sampling method and procedure to be used by designated operational entities for verification of GHG emission reductions by CPAs under the programme? OR If the programme does not use verification method that applies a statistical method for sampling, has a system been defined to avoid double counting of CERs, and is the system transparent?	/1/	DR	Section A.4.4.2 of the PoA-DD does not describe the statistically sound sampling method/procedure to be used by DOEs for verification of the amount of emission reductions achieved by CPAs under the PoA.	CAR-2	OK
B. Duration of the Programme of Activities, Crediting Period					
B.1.1. Are the programme starting date and length of the programme clearly defined and evidenced?	/1/	DR	The starting date of the programme is indicated as November 2008. However, it needs to be clarified how this start date meets the definition for the start data adopted by the CDM EB at its 41st meeting, i.e. the starting date shall be considered to be the date on which the project participant has committed or will commit to expenditures related to the implementation or related to the construction of the project activity. The length of the PoA is 28 years.	CL-3	OK
B.1.2. Does the PoA design documentation confirm that the length of the PoA does not exceed 28	/1/	DR	The length of the PoA does not exceed 28 years.		OK

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
years?					
C. Environmental Impacts <i>Documentation on the analysis of the environmental impacts will be assessed, and if deemed significant, an EIA should be provided to the validator.</i>			<input checked="" type="checkbox"/> Analysis at PoA level <input type="checkbox"/> Analysis at CPA level		
C.1.1. Has an analysis of the environmental impacts of the programme been sufficiently described?	/1/	DR	<p>The CFLs have been approved for use in households by the Government of Mexico, and do not entail significant negative environmental impacts.</p> <p>There are possible environmental impacts by the project as an inappropriate treatment of CFLs that have reached the end of their lifetime. The PoA-DD states that effective centralised collection facilities for waste CFLs will be established. Further information should be provided on how it is ensured that such collection in cooperation with the Mexican government facilities will be implemented.</p>	CL 4	OK
C.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA)?	/1/	DR	<p>No EIA needs to be performed according to Mexican law for installing CFLs.</p> <p>A qualitative EIA was carried out and the results included in Annex 9 to the PoA-DD.</p>		OK
C.1.3. Will the programme create any adverse environmental effects?	/1/	DR	<p>If waste CFLs are adequately treated and the mercury contained in CFLs is collected and recycled, the project will not create any adverse environmental effects.</p>		OK
C.1.4. Are transboundary environmental impacts considered in the analysis?	/1/	DR	<p>Given the nature of the project, it is not necessary to consider transboundary environmental impacts.</p>		OK

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
C.1.5. Have identified environmental impacts been addressed in the programme design?	/1/	DR	Potential environmental impacts of the programme have been addressed. Further information should be provided on how it is ensured that effective centralised collection facilities for waste CFLs will be established in cooperation with the Mexican government.	CL-4	OK
C.1.6. Does the programme comply with environmental legislation in the host country?	/1/	DR	The CFLs have been approved for use in households by the Government of Mexico.		OK
D. Stakeholder Comments <i>The validator should ensure that stakeholder comments have been invited with appropriate media and that due account has been taken of any comments received.</i>			<input type="checkbox"/> Consultation at PoA level <input checked="" type="checkbox"/> Consultation at CPA level		
D.1.1. Have relevant stakeholders been consulted?	/1/	DR	<p>A stakeholder consultation meeting was carried out in Mexico City involving relevant stakeholders, such as relevant government agencies and NGOs.</p> <p>A further public consultation meeting was conducted in Puebla, the location of the first CPA. It should be clarified if further public consultation meetings will also be carried out where other CPAs will be located.</p>	CL-5	OK
D.1.2. Have appropriate media been used to invite comments by local stakeholders?	/1/	DR	Public meetings were conducted which were advertised in national newspapers.		OK
D.1.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	/1/	DR	Not applicable. No stakeholder consultation process is required by regulations/laws in Mexico.		OK
D.1.4. Is a summary of the stakeholder comments	/1/	DR	The stakeholder consultations, the comments		OK

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received provided?			received and the answers given by Cool nrg are extensively documented in Annexed to the PDD.		
D.1.5. Has due account been taken of any stakeholder comments received?	/1/	DR	Comments by stakeholders were adequately addressed.		OK
E. Programme Baseline <i>The validation of the programme baseline establishes whether the selected baseline methodology is appropriate and whether the selected baseline represents a likely baseline scenario.</i>					
E.1. Baseline Methodology <i>It is assessed whether the programme applies an appropriate baseline methodology.</i>					
E.1.1. Does the programme apply an approved methodology and the correct version thereof?	/1/	DR	The PoA applies AMS-II.C, version 09.		OK
E.1.2. Are the applicability criteria in the baseline methodology all fulfilled?	/1/	DR	The programme comprises activities that encourage the adoption of energy-efficient equipment (CFLs) for each replaced equipment the capacity or output or level of service (i.e. light output) is not significantly larger or smaller (maximum $\pm 10\%$) than the baseline. CFLs provided to households will have rated power outputs of 15W and 20W (equivalent in lumen output to incandescent bulbs of at least 60W and 75W, respectively. Even in cases where the lumen output of the CFL is more than 10% above the lumen output of the replaced incandescent light bulb, this results in a conservative outcome in terms of energy		OK

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			savings and emission reductions.		
E.2. Baseline Scenario Determination <i>The choice of the baseline scenario will be validated with focus on whether the baseline is a likely scenario, and whether the methodology to define the baseline scenario has been followed in a complete and transparent manner.</i>					
E.2.1. What is the baseline scenario?	/1/	DR	The baseline scenario is that incandescent bulbs would not be replaced by CFLs. This is in accordance with AMS-II.C as the emission baseline is the baseline energy consumption of equipment displaced.		OK
E.2.2. What other alternative scenarios have been considered and why is the selected scenario the most likely one?	/1/	DR	<p>Three alternatives to the proposed PoA have been identified:</p> <p>I. The activity could occur without being registered as a PoA through government or private sector support.</p> <p>II. Individual or collaborative efforts by Mexican retailers to promote rapid uptake of energy efficient lighting technology by households in Mexico. This scenario would entail consumers to responding to increased marketing or promotion of efficient lighting alternatives and purchasing CFLs.</p> <p>III. Continuation of the current situation: The baseline alternatives include either continued use of existing household lighting, or autonomous replacement of current bulbs with new technologies or measures of either the same</p>	CAR-3	OK

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			or greater efficiency. While these three baseline alternatives are listed in the PDD, it is not demonstrated that these alternatives face significant barriers and are thus not likely baseline scenarios.		
E.2.3. Has the baseline scenario been determined according to the methodology?	/1/	DR	The baseline is determined is in accordance with AMS-II.C as the emission baseline is the baseline energy consumption of equipment displaced.		OK
E.2.4. Has the baseline scenario been determined using conservative assumptions where possible?	/1/	DR	The baseline assumes that no replacement of incandescent bulbs by CFLs would occur. Given that there are energy efficiency campaigns of key institutions such as FIDE (Trust Fund for Electrical Energy) and Conae (National Energy Savings Commission), it must be further justified that this assumption is conservative.	CAR-4	OK
E.2.5. Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations?	/1/	DR	Energy efficiency campaigns of key institutions such as FIDE (Trust Fund for Electrical Energy) and CONAE (National Energy Savings Commission) were considered.		OK
E.2.6. Is the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced?	/1/	DR	An estimation of current and future penetration of CFLs in Mexico is provided in Annex 3 of the PoA-DD. This estimation is based on studies performed by the World Bank, CONAE and FIDE. This estimation states that the penetration of CFLs in 2007 is 20%. This questions the assumption that no replacement of incandescent bulbs by CFLs would occur in	CAR-4	OK

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			absence of the PoA.		
E.2.7. Have the major risks to the baseline been identified?	/1/	DR	The penetration of CFLs in absence of the PoA has not been considered in the baseline determination.		OK
E.3. Additionality of the Programme of Activities					
E.3.1. Has it been demonstrated that the programme is a voluntary coordinated action that would not be implemented in the absence of CDM?	/1/	DR	The replacement of incandescent bulbs with CFLs is not required by any law and is thus a voluntary coordinated action.		OK
E.3.2. If the programme is implementing a mandatory policy/regulation, has it been demonstrated whether the policy/regulation is being enforced? If it is enforced, has it been demonstrated that the programme will lead to a higher level of enforcement?	/1/	DR	<i>Not applicable.</i>		N/A
E.3.3. Are all assumptions stated in a transparent and conservative manner?	/1/	DR	All assumptions are transparently stated.		OK
E.3.4. Is sufficient evidence provided to support the relevance of the arguments made?	/1/	DR	It is established that there is no mandatory policy regulation.		OK
E.3.5. If the starting date of the programme activity is before the date of validation, has sufficient evidence been provided that the incentive from the CDM was seriously considered in the decision to proceed with the programme?	/1/	DR	The starting date of the PoA is after the start date of validation.		OK
E.4. Additionality of CPAs					
E.4.1. Is the approach described for demonstrating additionality of a CPA in accordance with the using the procedure provided in the baseline and monitoring methodology applied?	/1/	DR	AMS-II.C requires that the additionality is demonstrated through a barrier analysis in accordance with Attachment A to Appendix B of the simplified modalities and procedures for small-scale CDM project activities. However,	CAR-5 CAR-6	OK

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			no barrier analysis is applied to demonstrate additionality of a CPA. A simple cost analysis will be provided for each CPA to demonstrate that without CDM revenue the CPA is not financially attractive. A simple cost analysis is chosen as the organisation implementing the project and giving away CFLs fee of charge will not have any financial or economical benefits other than CDM related income. While this is correct from the project proponent's perspective, the use of CFLs will result in decreased electricity bills by the participating households, and it is not demonstrated through a financial analysis that this benefit could make the use of CFLs financially attractive also without CER revenues from the households perspective		
E.4.2. Are specific criteria for demonstrating the additionality of a specific CPA included to the PoA?	/1/	DR	Specific criteria for assessing the additionality of each CPA are established. The adequacy of these criteria will have to be confirmed after CAR 5 and CAR 6 indicated above are resolved.	--	OK
E.4.3. Is the additionality of a typical CPA demonstrated?	/1/	DR	While three baseline alternatives are listed in the PDD, it is not demonstrated that these alternatives face significant barriers and are thus not likely baseline scenarios.	CAR 3	OK
E.5. Calculation of GHG Emission Reductions – Project emissions <i>It is assessed whether the procedure for calculating project emissions is according to the</i>					

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
<i>methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified.</i>					
E.5.1. Has the procedure to calculate project emissions of an individual CPA been documented according to the approved methodology and in a complete and transparent manner?	/1/	DR	<p>Project emissions will be determined in accordance with AMS-II.C.</p> <p>The main procedures are described. However, no detailed procedures for calculating project emissions are given, addressing issues such as</p> <ul style="list-style-type: none"> - how many days after distribution of a CFL it is assume that this CFL is implemented - how results from monitoring the operating hours at the sample of households are extrapolated to the households where no monitoring will take place - how results from the annual check to ensure ongoing operation at the sample of households are extrapolated to the households where no such check will take place - how it is considered that CFLs may reach the end of their lifetime within the crediting period of a CPA. 	CAR-7	OK
E.5.2. Have conservative assumptions been used when determining the procedure to be used to calculate the project emissions?	/1/	DR	Even in cases where the lumen output of the CFL is more than 10% above the lumen output of the replaced incandescent light bulb, this results in a conservative outcome in terms of energy savings and emission reductions.		OK
E.5.3. Are uncertainties in the project emission calculation procedure properly addressed?	/1/	DR	Yes		OK
E.6. Calculation of GHG Emission Reductions – Baseline					

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
emissions <i>It is assessed whether the procedure for calculating baseline emissions is according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified.</i>					
E.6.1. Has the procedure to calculate baseline emissions of an individual CPA been documented according to the approved methodology and in a complete and transparent manner?	/1/	DR	<p>The calculation of baseline emissions is in accordance with AMS-II.C.</p> <p>The main procedures are described. However, no detailed procedures for calculating baseline emissions are given, addressing issues such as</p> <ul style="list-style-type: none"> - how results from monitoring the operating hours at the sample of households are extrapolated to the households where no monitoring will take place - how results from the annual check to ensure ongoing operation at the sample of households are extrapolated to the households where no such check will take place - how it is considered that CFLs may reach the end of their lifetime within the crediting period of a CPA. <p>Moreover, as required by AMS-II.C, the emission factor for grid electricity is determined in accordance with AMS-I.D which again refers to the “Tool to calculate the emission factor for an electricity system”. The grid emission factor should be recalculated using the most recent data available at the time of submitting the PoA for validation.</p>	CAR-7 CAR-8 CAR ++	OK

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CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			Finally, version 9 of AMS-II.C does not allow to include technical grid losses in the determination of the amount of electricity generation reduced as a result of the project.		
E.6.2. Have conservative assumptions been used when determining the procedure to be used to calculate the baseline emissions?	/1/	DR	Data published by SENER were applied to determine the combined margin emission factor.		OK
E.6.3. Are uncertainties in the baseline emission estimates properly addressed?	/1/	DR	No uncertainties need to be addressed.		OK
E.7. Calculation of GHG Emission Reductions – Leakage <i>It is assessed whether the procedure for calculating leakage is according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified.</i>					
E.7.1. Has the procedure to calculate leakage emissions of an individual CPA been documented according to the approved methodology and in a complete and transparent manner?	/1/	DR	<p>The energy efficiency technology is not transferred from another activity or the existing equipment is transferred to another activity. Hence, leakage is not to be considered as required by AMS-II.C.</p> <p>Residents are expected to come to distribution points with their old incandescent bulbs and exchange them for CFLs with equivalent or greater lumen output. Incandescent bulbs collected during the exchange will be destroyed to prevent leakage and according to the PDD this process will be independently verified.</p> <p>As required for PoA applying AMS-II.C, the monitoring should include a check if the</p>	CAR-9	OK

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			number of project activity equipment distributed by the project and the number of scrapped equipment correspond with each other.		
E.8. Emission Reductions <i>The emission reductions shall be real, measurable and give long-term benefits related to the mitigation of climate change.</i>					
E.8.1. Does the PoA-DD provide a clear and correct way of calculating the emission reductions from each CPA?	/1/	DR	The approach for calculating the emission reductions is clear and in accordance with AMS-II.C.		OK
E.9. Monitoring Methodology <i>It is assessed whether the project applies an appropriate monitoring methodology.</i>					
E.9.1. Is the monitoring plan documented according to the approved methodology and in a complete and transparent manner?	/1/	DR	The monitoring plan to be applied by each CPA covers the parameters to be monitored to determine project and baseline emissions: i) the number of operational CFLs ii) the number of incandescent light bulbs replaced and their power rating iii) the power rating of the CFLs being exchanged for the incandescent light bulbs iv) the average annual operating hours of CFLs These parameters allow determining baseline and project emissions in accordance with AMS-II.C.		OK
E.9.2. Will all monitored data required for verification and issuance be kept for two years after the end of the crediting period or the last issuance of CERs, for this programme,	/1/	DR	It must be clarified if all monitored data required for verification and issuance is kept for two years after the end of the crediting period or the last issuance of CERs, for this programme,	CL-6	OK

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whichever occurs later?			whichever occurs later.		
E.10. Monitoring Plan <i>It is established whether the monitoring plan provides for reliable and complete emission data over time.</i>					
E.10.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the greenhouse gas emissions within the programme boundary during the crediting period?	/1/	DR	The monitoring parameters allow determining baseline and project emissions in accordance with AMS-II.C.		OK
E.10.2. Are the choices of programme GHG indicators reasonable and conservative?	/1/	DR	The parameters selected are reasonable.		OK
E.10.3. Is the measurement method clearly stated for each GHG value to be monitored and deemed appropriate?	/1/	DR	The measurement methods for each parameter are stated. AMS-II.C requires an independent monitoring of scrapping of replaced equipment needs to be implemented. In the monitoring plan in section E.7.1 of the PoA-DD it is stated that this verification will be carried out by a DOE. However, this verification needs to be carried out by another verifier and the results from the verification will have to be presented to the verifying DOE.	CL7 CL8	OK
E.10.4. Is the measurement equipment described and deemed appropriate?	/1/	DR	Measurement equipment use to determine the average annual operating hours of CFLs are described and deemed appropriate.		OK
E.10.5. Is the measurement accuracy addressed and deemed appropriate? Are procedures in place	/1/	DR	Sampling of households is applied to determine the operating times of CFLs and to determine	CL7 CL8	

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on how to deal with erroneous measurements?			<p>the number of operational CFLs.</p> <p>There will be one sample group of 60 households per 1 million CFLs distributed where the operating hours of CFLs will be monitored.</p> <p>There will be a second sample group of 60 households per 1 million CFLs distributed for annually checking the ongoing operation of the CFLs.</p> <p>As described in Annex 8 to the PDD, both sample groups will be selected by random and a random selection of municipalities, suburbs within municipalities, blocks and households.</p> <p>As the use of CFLs represents fixed loads while operating, the sample can be small and a sample group of 60 households per 1 million CFLs distributed is considered adequate.</p> <p>Section E.6.3 of the PoA-DD states that in each sample household four lamps will be monitored. However, it remains to be clarified how it can be assured that each household will install at least four CFLs.</p> <p>The PoA-DD states that for each CPA of 1 million CFLs distributed, a total sample size of 240 CFLs will be monitored in order to be statistically representative with an error margin of +/- 6.5% at 95% confidence level. The basis for determining this error margin needs to be further justified.</p>		
E.10.6. Is the measurement interval identified and	/1/	DR	Each exchange of incandescent bulbs with CFLs		OK

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deemed appropriate?		I	at the distribution points will be recorded.		
E.10.7. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	/1/	DR I	Practises and a software for registering the distribution of CFLs are established.		OK
E.11. Monitoring of Sustainable Development Indicators/ Environmental Impacts <i>It is assessed whether choices of indicators are reasonable and complete to monitor sustainable performance over time.</i>					
E.11.1. Is the monitoring of sustainable development indicators/ environmental impacts warranted by legislation in the host country	/1/	DR	Not applicable. Monitoring of sustainable development indicators is not required.		N/A

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Table 3 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. to table 2	Summary of project participants response	Validation team conclusion
<p>CAR 1</p> <p>Letters of approval by the DNAs of Mexico and the United Kingdom including the authorization of the project participants Cool nrg Mexico SRL de CV and Cool nrg Carbon Investments Pty Ltd, respectively, and including a confirmation by the DNA of Mexico that the project contributes to sustainable development need to be provided.</p>	<p>A.2.3</p> <p>A.4.1</p>	<p>Letters of Approval from both the Mexican and UK DNAs have been provided in this response. The LoA from the Mexican DNA confirms that the PoA contributes positively to the sustainable development goals of the country.</p>	<p>Letter of approvals by the DNAs of Mexico and the United Kingdom including the authorization of the project participants Cool nrg Mexico SRL de CV and Cool nrg Carbon Investments Pty Ltd, respectively, and including a confirmation by the DNA of Mexico that the project contributes to sustainable development were provided by the project participants.</p> <p>CAR is closed.</p>
<p>CAR 2</p> <p>Section A.4.4.2 of the PoA-DD does not describe the statistically sound sampling method/procedure to be used by DOEs for verification of the amount of emission reductions achieved by CPAs under the PoA.</p>	<p>A.6.4</p>	<p>Section A.4.4.2 of the PoA DD has been amended to provide an overview of the verification procedure to be used by the DOE for each CPA, including a description of the record keeping employed to prevent double counting. <i>(Please note that “Track Changes” was inadvertently turned off while making these amendments so that the text changes are not highlighted.)</i></p>	<p>The project participants have opted for a verification method that does not use sampling but verifies each CPA. A transparent system is defined and described to ensure that no double accounting occurs and that the status of verification can be determined at any time for each CPA. Due to the choice of this option, no sampling method/procedure to be used by the verifying DOE needs to be defined.</p> <p>CAR is closed.</p>
<p>CAR 3</p> <p>While the three baseline alternatives are listed in the PDD, it is not demonstrated that these alternatives face significant barriers and are thus not likely baseline scenarios.</p>	<p>E.2.2</p>	<p>Sections A.4.3 and E.5.1 of the PoA DD, and B.3 of the CPA DDs have been amended to include a discussion of the barriers faced by each of the alternative scenarios listed. These barriers reinforce the additionality of the proposed PoA, as each of the possible</p>	<p>Barriers supported by independent studies are presented. However, for the barriers for CFL distribution by government programmes it is stated that “Whilst in 2008 the Minister of Energy announced the distribution of 130,000 CFLs to</p>

Draft report clarifications and corrective action requests by validation team	Ref. to table 2	Summary of project participants response	Validation team conclusion
		alternatives, whilst consistent with mandatory laws and regulations, are not likely to occur due to the absence of the CDM.	indigenous communities in the states of Quintana Roo, Sinaloa and Sonora , there are clearly financial and planning barriers to the Mexican Government, or other sponsor, from undertaking a free CFL distribution of the same scale as that proposed under the PoA”. Further substantiation by independent sources for this statement is requested.
<p>CAR 3 (continued)</p> <p>Further substantiation by independent sources is requested for the statement that there are clearly financial and planning barriers to the Mexican Government, or other sponsor, from undertaking a free CFL distribution of the same scale as that proposed under the PoA.</p>		<p>The Mexican Government’s own climate change planning documents provide the evidence of the planning and financial barriers exist to the Federal government undertaking the free distribution of CFLs on a comparable scale to that proposed by the SSC-PoA. The coordinating entity believes that the clear absence of a stated intention in the most recent National Climate Change Strategy to undertake a free distribution of CFLs strongly indicates that such barriers exist.</p> <p>The National Climate Change Strategy makes reference to a desire to run efficient lighting programs in the future, however, these programs will take the same form as the Ilumex program conducted between 1995 and 19971. As discussed in the PoA-DDs, these programs do not involve free distribution of CFLs, but</p>	<p>It is sufficiently demonstrated through independent documents that there are clearly financial and planning barriers to the Mexican Government, or other sponsor, from undertaking a free CFL distribution of the same scale as that proposed under the PoA.</p> <p>CAR is closed.</p>

¹ SEMARNAT/Subsecretaria de Planeacion y Politica Ambiental, 2007, “National Climate Change Strategy”.
http://www.semarnat.gob.mx/queessearnat/politica_ambiental/cambioclimatico/Pages/estrategia.aspx
http://www.semarnat.gob.mx/Documents/Estrat_nal_Sintesis.pdf

Draft report clarifications and corrective action requests by validation team	Ref. to table 2	Summary of project participants response	Validation team conclusion
		<p>rather consumers purchasing CFLs through staged payments made in conjunction with their electricity bills. There are no specific targets, locations or timelines set for future programs of this nature.</p> <p>Further, the Federal government has specifically identified the CDM and carbon finance as a source of revenue to deliver climate change projects in collaboration with the private sector in Mexico. On page 62 the Strategy states:</p> <p>“The current Strategy proposes the implementation of the following legal, economic, financial and administrative actions:</p> <ul style="list-style-type: none"> - Facilitate and encourage private investments - Improve the conditions and contracts of purchase of electricity from renewable sources - To obtain economic resources from international funds (like CDM) to support the projects” <p>The statements made in the Strategy indicate three things: firstly, that the government does not plan to implement a free distribution of CFLs on the scale contemplated by the SSC-PoA. Secondly, the government is encouraging private sector involvement in climate change initiatives, and finally, the government is</p>	

Draft report clarifications and corrective action requests by validation team	Ref. to table 2	Summary of project participants response	Validation team conclusion
		<p>seeking international sources of finance to support such initiatives.</p> <p>It is therefore reasonable to assert that there are financial and planning barriers in place that would prevent the government of Mexico from implementing a project of the nature proposed under the SSC-PoA, without the use of the CDM. It has also indicated that in the case of CFLs it does not intend to use the CDM, but rather Ilumex style projects. Therefore, the claim by the project proponents that the SSC-PoA is above the business-as-usual scenario is valid.</p>	
<p>CAR 4</p> <p>The baseline assumes that no replacement of incandescent bulbs by CFLs would occur. Given that there are energy efficiency campaigns of key institutions such as FIDE (Trust Fund for Electrical Energy) and CONAE (National Energy Savings Commission), it must be further justified that this assumption is conservative.</p> <p>An estimation of current and future penetration of CFLs in Mexico is provided in Annex 3 of the PoA-DD. This estimation is based on studies performed by the World Bank, CONAE and FIDE. This estimation states that the penetration of CFLs in 2007 is 20%. This questions</p>	<p>E.2.4</p> <p>E.2.6</p>	<p>Section E.4 of the PoA has been updated to include further justification of the choice of baseline scenario.</p> <p>In summary, the low-income households targeted by this PoA do not use CFLs to the same extent as high-income groups (current penetration is estimated at approximately 2% compared to 20% for the whole population). In addition, the vast majority of autonomous replacement of incandescent bulbs with CFLs is the result of standard retail sales, rather than government programs. It is argued that low-income households are unlikely to purchase CFLs through standard retail channels due to their high cost.</p> <p>By providing CFLs free of charge, and by using distribution hubs located in retail stores with</p>	<p>The baseline determination takes into account relevant national policies and energy efficiency campaigns of key institutions such as FIDE (Trust Fund for Electrical Energy) and CONAE (National Energy Savings Commission). However, it is demonstrated based on studies by the World Bank and data published by FIDE that the penetration of CFLs in Mexico so far is mainly the result of standard retail sales, rather than government programs.</p> <p>By providing CFLs free of charge, and by using distribution hubs located in retail stores with traditionally low and medium income customers, the project proponents argue that the PoA will engage largely those households that do not currently</p>

Draft report clarifications and corrective action requests by validation team	Ref. to table 2	Summary of project participants response	Validation team conclusion
the assumption that no replacement of incandescent bulbs by CFLs would occur in absence of the PoA.		traditionally low and medium income customers, the project proponents argue that the PoA will engage largely those households that do not currently purchase CFLs through standard retail channels, and have previously not participated actively in government subsidised schemes. Autonomous replacement of incandescent bulbs with CFLs amongst those households is unlikely to be material, and as such the project proponents have argued that it is reasonable and conservative to define the baseline scenario as the continued use of incandescent light bulbs.	purchase CFLs through standard retail channels, and that have previously not participated actively in government subsidised schemes. The low-income households targeted by this PoA do not use CFLs to the same extent (current penetration is estimated at approximately 2%) as higher income groups /9/. It is argued and demonstrated through studies by recognised and independent organisations that low-income households are unlikely to purchase CFLs through standard retail channels due to their high cost. Hence, the selected baseline is deemed appropriate. It is also acknowledged that version 9 of AMS-II.C does not require to consider any baseline penetration calculations. Also the most recent version of AMS-II.C (version 12), the requirement to perform baseline penetration calculations was again deleted. CAR is closed.
CAR 5 AMS-II.C requires that the additionality is demonstrated through a barrier analysis in accordance with Attachment A to Appendix B of the simplified modalities and procedures for small-scale CDM	E.4.1	The discussion of additionality has been expanded to include a barrier analysis. This update has been provided in sections A.4.3 and E.5.1 of the PoA DD, and section B.3 of the CPA DD.	An analysis of the investment barriers was included in the PDD. CAR is closed.

Draft report clarifications and corrective action requests by validation team	Ref. to table 2	Summary of project participants response	Validation team conclusion
project activities. However, no barrier analysis is applied to demonstrate additionality of a CPA.			
<p>CAR 6</p> <p>A simple cost analysis is chosen as the organisation implementing the project and giving away CFLs free of charge will not have any financial or economical benefits other than CDM related income. While this is correct from the project proponents perspective, the use of CFLs will result in decreased electricity bills by the participating households and it is not demonstrated through a financial analysis that this benefit could make the use of CFLs financially attractive also without CER revenues from the households perspective.</p>	E.4.1	<p>CFLs will save consumers money off their electricity bill, thereby delivering financial returns to individual households without the CDM. If a consumer were to buy a CFL from a retail store, the energy savings would pay for the cost of the bulb over several years, and after that deliver additional financial savings. These benefits of energy efficiency are well understood, and are not disputed by the project proponents.</p> <p>However, as is discussed at length in the analysis now provided in the PDDs (in response to CAR 4 and CAR 5), there are significant, and well documented barriers to the uptake of energy efficient technologies, particularly by low income households. In past CFL projects undertaken in Mexico with CFE, FIDE, the World Bank and GEF involving no-interest financing through electricity bill charges, uptake by low-income households was still extremely low (less than 10% of CFL sales under this scheme). This low uptake was experienced under subsidized project conditions; under standard retail conditions it can be reasonably expected that low-income households will demonstrate even lower rates of participation.</p>	<p>A simple costs analysis is applied to demonstrate that the project would not be implemented by the project participants in absence of CDM benefits.</p> <p>No simple cost analysis is carried out for the other baseline alternatives. Instead, a barrier analysis has been included to demonstrate that these baseline alternatives are not the most likely baseline scenarios.</p> <p>Given that the above in CAR 4 and CAR 5 are appropriately addressed, this CARs is closed.</p>

Draft report clarifications and corrective action requests by validation team	Ref. to table 2	Summary of project participants response	Validation team conclusion
		<p>Using information of INEGI (National Institute of Statistics and Geography: National Survey on Incomes and Expenditures of Households) it is shown that to buy 4 CFLs represents 30% to 99% of the weekly income of 50% of the citizens in Mexico. This strong economic barrier outweighs the fact that CFLs generate economic savings in the long term.</p> <p>It is therefore reasonable to provide only a financial analysis of the project from the perspective of the project participant, as without the CDM mass uptake of CFLs by consumers targeted by the PoA faces significant barriers. Without the CDM, the potential financial savings for households will remain unrealized.</p>	
<p>CAR 7</p> <p>No detailed procedures for calculating project and baseline emissions are given, addressing issues such as</p> <ul style="list-style-type: none"> - how many days after distribution of a CFL it is assume that this CFL is implemented - how results from monitoring the operating hours at the sample of households are extrapolated to the households where no monitoring will take place - how results from the annual check to ensure ongoing operation at the sample of households are extrapolated 	E.5.1	<p>Section E.7.2 of the PoA DD and B.6.1 of the CPA DDs have been updated to provide further information on the procedure for calculating project and baseline emissions in order to address concerns raised by this CAR. In addition, sections E.6.2, E.6.3 and E.7.1 of the PoA DD and B.5.2 of the CPA DDs provide a description of monitoring data to be collected, and the application of the methodology to calculate emission reductions. Further, Section B.5.2 of the CPA DD (Puebla) provides a step-by-step description of the ex-ante calculation of emission reductions.</p> <p>The updated information in the PDDs should provide the answers to the questions raised in</p>	<p>Further details on the procedures for calculating project and baseline emissions were included in the PoA-DD, addressing the issues raised in this CAR.</p> <p>CAR is closed.</p>

Draft report clarifications and corrective action requests by validation team	Ref. to table 2	Summary of project participants response	Validation team conclusion
<p>to the households where no such check will take place</p> <ul style="list-style-type: none"> - how it is considered that CFLs may reach the end of their lifetime within the crediting period of a CPA. 		<p>the CAR. In summary:</p> <p>The distribution of CFLs will occur over a 30 day period. Given the fact that the project developer is asking the households to bring up to 4 incandescent light bulbs from their homes, it is assumed that the household will immediately install the CFLs. However, in order to be conservative, no energy savings generated during the first 30 days of the distribution period will be counted.</p> <p>The cross-check household surveys undertaken at the end of each monitoring period will confirm CFL installation and ongoing functionality. The coordinating entity believes this is a conservative action because the data found in the cross-check survey will apply retrospectively for that monitoring period without considering that more CFLs will be working at the beginning of the monitoring period than at the end.</p> <p>Results obtained from monitoring operating hours and cross check surveys will be extrapolated directly to the entire population of project and baseline devices involved in each CPA, as it is described and approved by the UN methodology.</p> <p>In order to undertake ex-ante calculations of emission reductions, the coordinating entity used the lifetime survival curve provided by the CFL manufacturer (the % decline in CFLs</p>	

Draft report clarifications and corrective action requests by validation team	Ref. to table 2	Summary of project participants response	Validation team conclusion
		functioning is provided in section B.5.2 of the CPA-DD and in Annex 3 of all DDs). CFLs are expected to fail throughout the duration of the crediting period, which will be directly measured by the cross-check household surveys. As discussed above, a conservative approach will be used whereby the proportion of CFLs operating at the end of each monitoring period will be applied retrospectively for the duration of the monitoring period.	
<p>CAR 8</p> <p>As required by AMS-II.C, the emission factor for grid electricity is determined in accordance with AMS-I.D which again refers to the “Tool to calculate the emission factor for an electricity system”. The grid emission factor should be recalculated using the most recent data available.</p>	E.6.1	<p>Updates made relate to changes to the calculation of the emission factor.</p> <p>The sections of the document impacted by these changes are E.6.2 of the PoA DD, and those detailing the ex-ante calculation of emissions reductions in the CPA DDs – section A.4.4 and B.5.3. In addition, all DDs have new Annex 3.</p> <p>Also attached is a new version of Annex 12 which provides detail of the EF calculations and assumptions.</p>	<p>The most recent data available at the time of submission of the PoA for validation were applied.</p> <p>The import/export data applied is correctly derived from SENER data for 2004, 2005 and 2006. However, the efficiency of power plants in Mexico is available and these efficiencies should be used instead of the standard 50%. Moreover, in the 2004 worksheet, the total sum of the gross generation does not match the one in the PDD.</p>
<p>CAR 8 (continued)</p> <p>The efficiency of power plants in Mexico is available and these efficiencies should be used instead of the standard 50%. Moreover, in the 2004 worksheet, the total sum of the gross generation does not match the one in the PDD. The formulas seem to be wrong in the spreadsheet,</p>		Emission Factor Calculation worksheet has been revised.	<p>The grid emission factor is correctly calculated applying generation data published by SENER.</p> <p>CAR is closed.</p>

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resulting in a very small difference (208,634 vs 208,630).			
<p>CAR 9</p> <p>As required for PoAs applying AMS-II.C, the monitoring should include a check if the number of project activity equipment distributed by the project and the number of scrapped equipment corresponds with each other.</p>	E.7.1	<p>Section E.7.2 of the PoA DD and B.6.1 of the CPA DDs has been updated to describe more fully the process by which the check of the numbers CFLs and incandescent bulbs will be undertaken.</p> <p>In summary, the DMS developed by the Coordinating Entity will record each individual bulb exchange transaction. At the end of the distribution period, the total numbers of project and baseline devices exchanged will be checked to ensure that they correspond. In the unlikely event that there is a discrepancy between the numbers of CFLs and incandescent bulbs recorded in the DMS, the coordinating entity will use the lower of the two numbers so that a smaller total number of bulbs distributed is used for emission reduction calculations for that CPA.</p>	<p>The description of the monitoring plan has been amended to describe the check that the number of project activity equipment distributed by the project and the number of scrapped equipment corresponds with each other</p> <p>CAR is closed.</p>
<p>CAR 10</p> <p>AMS-II.C requires an independent monitoring of scrapping of replaced equipment needs to be implemented. In the monitoring plan in section E.7.1 of the PoA-DD it is stated this verification will be carried out by a DOE. However, this verification needs to be carried out by another verifier and the results from the verification will have to be presented to</p>	E.10.1	<p>Section E.7.2 of the PoA DD and B.6.1 of the CPA DDs has been updated to fully describe the process by which the independent verification of the scrapping of baseline devices will be undertaken.</p> <p>In summary, the project developer will engage the company Especialistas Ambientales S.A. de C.V. to independently monitor the scrapping of replaced equipment as well as the data management system that will cross check the</p>	<p>Section E.7.2 of the PoA-DD describes that the local environmental audit firm Especialistas Ambientales S.A. de C.V. will conduct independent verification of the scrapping of incandescent light bulbs collected during the distribution process. Further details on this independent verification, such as how this verification is carried out and its frequency, should be included and this independent verification</p>

Draft report clarifications and corrective action requests by validation team	Ref. to table 2	Summary of project participants response	Validation team conclusion
the verifying DOE.		<p>amount of CFLs vs. incandescent bulbs exchanged.</p> <p>Especialistas Ambientales is a private consultant specialized in environmental auditing, consulting and certifications. The result of this process will be presented to the verifying DOE.</p>	should be included as a parameter in section E.7.1 of the PoA-DD.
<p>CAR 10 (continued)</p> <p>Further details on this independent verification, such as how this verification is carried out and its frequency, should be included and this independent verification should be included as a parameter in section E.7.1 of the PoA-DD.</p>		<p>As noted in the PoA-DD, Cool nrg has enlisted the services of Envirosense SA de CV to conduct an independent check of the collection and scrapping of incandescent light bulbs (IBs). The process for undertaking this check will include:</p> <ul style="list-style-type: none"> - At least one physical spot check at a randomly selected retail store during the CFL distribution process to ensure that exchange procedures are being followed. - On completion of the distribution process the independent verifier will conduct an inspection of the project database to ensure that electronic records have been correctly entered and that the number of CFLs distributed corresponds with the number of IBs collected. - A physical spot check will be conducted of IBs prior to their destruction in order to satisfy the independent verifier that collection has been undertaken correctly. This check will not include counting of IBs, 	<p>The independent verification of the scrapping of incandescent light bulbs collected during the distribution process is included as a parameter in section E.7.1 of the PoA-DD.</p> <p>CAR is closed.</p>

Draft report clarifications and corrective action requests by validation team	Ref. to table 2	Summary of project participants response	Validation team conclusion
		<p>as this is not realistic given the large number of IBs being scrapped.</p> <p>The independent verifier will then be present while the scrapping of IBs is undertaken to ensure that no leakage occurs.</p> <p>This process will be followed for each CPA, and a written report will be provided to the verifying DOE to demonstrate compliance with this aspect of the monitoring requirements.</p> <p>The PoA-DDs have been updated to include these items as a parameter under the monitoring plan.</p>	
<p>CAR 11</p> <p>Version 9 of AMS-II.C does not allow to include technical grid losses in the determination of the amount of electricity generation reduced as a result of the project.</p>		<p>Technical grid losses were removed in the equations for determining the amount of electricity generation reduced as a result of the project.</p>	<p>Technical grid losses were removed in the equations for determining the amount of electricity generation reduced as a result of the project.</p> <p>CAR is closed.</p>
<p>CL 1</p> <p>One eligibility criteria for including CPAs is that each CPA must implement the monitoring requirements of AMS-II.C and it remains to be clarified how this represents an eligibility criterion as this is a general requirement for applying AMS-II.C.</p>	A.1.4	<p>Eligibility criteria have been clarified in line with the issue raised in CL 1, and expanded to provide further details for the DOE conducting future inclusions of CPAs.</p>	<p>The eligibility criteria have been clarified.</p> <p>CL is closed.</p>
<p>CL 2</p> <p>It remains to be clarified whether and how the organisations assisting in the</p>	A.6.2	<p>This methodology is applicable to programs or activities introducing efficient technologies to households and institutions within a distinct</p>	<p>Examples of how participating households are informed that their activity is being subscribed to a climate</p>

Draft report clarifications and corrective action requests by validation team	Ref. to table 2	Summary of project participants response	Validation team conclusion
<p>implementation of the project, such as the retailers used to distribute CFLs, and the participating households are made aware and agree that their activity is being subscribed to the PoA</p>		<p>geographical area. The project activity is overseen by the coordinating entity who acts as a project participant. The individual households will not act as project participants.</p> <p>This PoA is a voluntary action and therefore the participation of households in this activity is voluntary. Their agreement to have their activity subscribed to the PoA is considered implied by the acceptance of free CFLs. Households are being made aware that the activity they are participating in relates to a climate change action program involving the distribution of CFLs. It is not intended however, to provide detailed, technical information regarding programmatic CDM rules and the creation of CERs, as this is considered inappropriate and superfluous to the requirements of PoA.</p> <p>The distribution partners have agreed contractually with the coordinating entity that their activity is subscribed to the PoA.</p>	<p>change action programme, so that once can assume that they implicitly agree to this by accepting the free CFLs.</p> <p>Examples of how the distribution partners have agreed contractually with the coordinating entity that their activity is subscribed to the PoA are requested.</p>
<p>CL 2 (continued)</p> <p>Examples of how participating households are informed that their activity is being subscribed to a climate change action programme, so that once can assume that they implicitly agree to this by accepting the free CFLs.</p> <p>Examples of how the distribution partners have agreed contractually with the</p>		<p>Legal agreements have been put in place with our distribution partners Comex and Coppel clearly stipulating that their activities are subscribed to the SSC-PoA. MOUs (in Spanish) summarising the key terms of these contracts have been provided as an attachment to this submission. Note that these agreements have been provided previously to the DOE in Mexico.</p>	<p>The MoUs state that Cool nrg will be responsible for the calculation and the certification of the reduction in electricity and associated emission reductions which implicitly confirm that the distribution partners have agreed with the coordinating entity that their activity is subscribed to the PoA.</p> <p>The information material provided shows</p>

Draft report clarifications and corrective action requests by validation team	Ref. to table 2	Summary of project participants response	Validation team conclusion
coordinating entity that their activity is subscribed to the PoA are requested.		Households will be made aware that they are participating in a climate change action program aiming to reduce greenhouse gas emissions. Example promotion and information materials used for CUIDEMOS Mexico have been provided as an attachment to this submission. It is reasonable to expect that having been made aware of the nature of the program, and by accepting the free CFLs there is implied agreement by the household that their activity is subscribed to the relevant CPA.	that households are being made aware that the use of CFL contributes to mitigate climate change. CAR is closed.
CL 3 It needs to be clarified how this start date meets the definition for the start data adopted by the CDM EB at its 41 st meeting, i.e. the starting date shall be considered to be the date on which the project participant has committed or will commit to expenditures related to the implementation or related to the construction of the project activity.	B.1.1	The starting date of the PoA has been amended to June 2009. By the definition set out in EB 41, the start date of the PoA will be considered when “real action” occurs. In the case of CUIDEMOS Mexico the starting date of the PoA will be when registration of the PoA achieved – end of May 2009. It is at this stage that CFLs will be ordered for the first CPA to be implemented under the PoA. It is considered that this commitment to invest in CFLs represents the start date of the PoA. Section A.4.2 of the CPA-DD has also been updated to reflect these changes.	The start date has been revised to meet the definition for the start data adopted by the CDM EB at its 41 st meeting, i.e. the starting date is considered to be the date on which the project participant is expected to commit to expenditures related to the implementation of the project activity. CL is closed.
CL 4 There are possible environmental impacts by the project as an inappropriate treatment of CFLs that have reached the end of their lifetime. The PoA-DD states that effective centralised collection	C.1.1 C.1.5	The project developer is working in collaboration with the Ministry for Natural Resources (Semarnat) as well as with the company Servicios Integrales de Residuos SA de CV which specializes in the storage and recovery of hazardous materials (see attachment	The collaboration with the Ministry for Natural Resources (Semarnat) as well as with the company Servicios Integrales de Residuos SA de CV should be included in monitoring plan, so that verifying DOE can follow-up on the implementation of

Draft report clarifications and corrective action requests by validation team	Ref. to table 2	Summary of project participants response	Validation team conclusion
<p>facilities for waste CFLs will be established in cooperation with the Mexican government. Further information should be provided on how it is ensured that such collection facilities will be implemented.</p>		<p>provided detailing the company's government accreditation authorizing them to store and dispose of hazardous materials).</p> <p>The coordinating entity has proposed a program for recovery of CFLs when they reach their end of life involving Servicios Integrales for the responsible management of CFL waste. In addition, we have proposed a communication campaign to be implemented in combination with our current media partners, Consejo de la Comunicacion, to encourage households to deposit their CFLs in specific locations. The location of the collection points still has to be agreed with current project partners and relevant government institutions, however, it is envisaged that prominent Mexican retailers may act as centralised collection points for CFLs.</p> <p>It should be noted that discussions with local stakeholders as part of the Gold Standard consultation process and DNA approval were satisfied with approach taken by the Coordinating Entity.</p>	<p>these planned actions.</p>
<p>CL 4 (continued)</p> <p>The collaboration with the Ministry for Natural Resources (Semarnat) as well as with the company Servicios Integrales de Residuos SA de CV should be included in monitoring plan, so that verifying DOE can follow-up on the implementation of these planned actions.</p>		<p>The monitoring plan in the PDD has been updated to include ongoing collaboration with Mexican government and non government stakeholders to develop CFL collection and recycling programs. The progress on this item can be checked by the verifying DOE.</p>	<p>The monitoring plan was amended to monitor the implementation of the CFL collection and recycling scheme.</p>

Draft report clarifications and corrective action requests by validation team	Ref. to table 2	Summary of project participants response	Validation team conclusion
<p>CL 5</p> <p>A public consultation meeting was conducted in Puebla, the location of the first CPA. It should be clarified if further public consultation meetings will also be carried out where other CPAs will be located.</p>	D.1.1	<p>As stated in the PoA-DD, the stakeholder engagement process will be undertaken at the level of PoA rather than individual CPAs. The Gold Standard has agreed that this approach is reasonable in light of the level of social and environmental impacts caused by this PoA when compared to others involving energy infrastructure such as dams.</p> <p>Two stakeholder consultations have been conducted, one in Mexico City, which is where all major national stakeholders are located. The second consultation was in Puebla, the location of the first CPA, to enable stakeholders to ask practical questions about implementation. There are no further consultations planned.</p>	<p>Further justification is requested why, based on the results of first two public consultation meeting, no consultation meetings in other cities where CPAs will be implemented are considered necessary.</p>
<p>CL 5 (continued)</p> <p>Further justification is requested why, based on the results of first two public consultation meeting, no consultation meetings in other cities where CPAs will be implemented are considered necessary.</p>		<p>PoA-DDs have been amended to change the level of stakeholder consultation from PoA level to CPA level. Each time a CPA is undertaken, a stakeholder consultation will be conducted in the relevant geographic area. If CPAs are to be implemented concurrently in adjacent regions, a single consultation meeting will be held as long as stakeholders are able to adequately access and contribute to the meeting.</p>	<p>Stakeholder consultation will be conducted in the relevant geographic area for each CPA.</p> <p>CL is closed.</p>
<p>CL 6</p> <p>It must be clarified if all monitored data required for verification and issuance be kept for two years after the end of the crediting period or the last issuance of</p>	E.9.6	<p>Section E.7.1 of the PoA DD has been updated to satisfy this requirement. The coordinating entity will ensure that all data will be stored in the project DMS for at least two years after the crediting period or the last issuance of CERs,</p>	<p>Section E.7.1 now clarifies that all monitored data required for verification and issuance be kept for two years after the end of the crediting period or the last issuance of CERs, for this programme,</p>

Draft report clarifications and corrective action requests by validation team	Ref. to table 2	Summary of project participants response	Validation team conclusion
CERs, for this programme, whichever occurs later.		for this programme, whichever occurs later. Records will be stored electronically on a secure server that is regularly back-up by the commercial service provider who designed and hosts the online DMS.	whichever occurs later. CL is closed.
CL 7 Section E.6.3 of the PoA-DD states that in each sample household four lamps will be monitored. However, it remains to be clarified how it can be assured that each household will install at least 4 CFLs.	E.10.5	The critical variable for the determination of statistically robust monitoring data is the number of CFLs monitored, rather than the number of CFLs in each household. To clarify, section E.6.3 of the PoA DD and B.5.1 of the CPA DDs have been updated to reflect that the sample size will be driven by the need to obtain data from a large enough pool of light bulbs rather than being limited if households have less than four CFLs installed.	The clarifications provided are accepted. CL is closed.
CL 8 The PoA-DD states that for each CPA of 1 million CFLs distributed, a total sample size of 240 CFLs will be monitored in order to be statistically representative with an error margin of +/- 6.5% at 95% confidence level. The basis for determining this error margin needs to be further justified.	E.10.5	The formula used to calculate the margin error given the selected sample group is as follows(*): $m = z * (stdev / \sqrt{n})$ Where: m = margin error (6.33%) z = value according to the Confidence Level (e.g for 95% Confidence level, z= 1.96) stdev = Standard deviation of sample. n = sample size (e.g. 240) Cool nrg has calculated a standard deviation of 0.5 and a mean of 3 hours per day. This	Clarifications on the suggested sample size are provided and the approach represents a statistically sound sampling method/procedure. CL is closed.

Draft report clarifications and corrective action requests by validation team	Ref. to table 2	Summary of project participants response	Validation team conclusion
		<p>standard deviation means that the hours of use of the sample group will oscillate between 2.1 hours and 3.8 hours per day.</p> <p>This error margin and level of uncertainty is more conservative than that allowed under similar approved methodologies that require sampling (e.g. AMS IIJ). The Executive Board has accepted “sampling determined by minimum 90% confidence interval and 10% maximum error margin” (AMS- II.J Demand side activities for efficient lighting technologies, footnote 6, page 3/15).</p> <p>(*) <i>Introduction to the Practice of Statistics</i>, D Moore & G. McCabe, 1993, Freeman, p. 438</p>	

APPENDIX B

PROTOCOL FOR ASSESSING COMPLIANCE OF SPECIFIC CDM PROGRAMME ACTIVITIES WITH THE PROGRAMME OF ACTIVITIES

CHECKLIST QUESTION		Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
A. General description of CPA						
A.1. Project boundaries						
A.1.1	Are the CPA's spatial boundaries (geographical) clearly defined, allowing the unique identification of the CPA?					
A.1.2	Has it been demonstrated that the CPA is within the geographical borders of the PoA?					
A.1.3	Has it been confirmed that no part of the CPA is registered as a CDM project or included in a registered PoA?					
A.2. Participation requirements						
A.2.1	Which Parties and CPA implementer are participating in the CPA? Are they included in the PoA?					
A.3. Duration of the CDM programme activity, Crediting Period						
A.3.1	Are the CPA's starting date and operational lifetime clearly defined and evidenced?					
A.3.2	Has the crediting period been clearly defined and is the start of the crediting period deemed to be reasonable?					
A.3.3	Has it been confirmed that the length of the CPA crediting period does not exceed the end of PoA?					
B. Eligibility of CPA and Estimation of Emission Reductions						
B.1. Eligibility criteria for CDM Programme Activities						
<i>It is assessed whether the CPA complies with the criteria for inclusion in the registered programme of activities.</i>						
B.1.1	Does the CPA involve the distribution of energy efficient light bulbs to households within the					

CHECKLIST QUESTION		Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
	geographical boundary of Mexico?					
B.1.2	Does the CPA apply the baseline and monitoring methodology AMS II.C. 'Demand-side energy efficiency programmes for specific technologies' v.9?					
B.1.3	Are there no other CPA or CDM project involving the distribution and/or installation of energy efficient light bulbs already registered and operating in the same, specific physical geographical area?					
B.1.4	Will the coordinating entity 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?					
B.1.5	Is the CPA be uniquely identified and defined in an unambiguous manner by providing geographic information, and the exact start date and end date of the crediting period?					
B.1.6	Does the CPA-DD ensure that leakage, additionality, establishment of the baseline scenario, baseline emissions, eligibility and double counting are unambiguously defined?					
B.1.7	Is the CPA must approved by the coordinating entity?					
B.1.8	Does the CPA satisfy de-bundling rules for PoA?					
B.2. Additionality <i>It is assessed whether the CPA complies with the eligibility criteria for demonstrating additionality of a CPA under the registered programme of activities.</i>						

CHECKLIST QUESTION		Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
B.2.1	Is it confirmed that at no stage there were public or private announcements made regarding the SSC-CPA proceeding without use of the CDM (Gold Standard requirement)?					
B.2.2	Are credible possible alternative scenarios relating to the distribution of the energy efficient light bulbs relevant to the CPA defined?					
B.2.3	Is it ensured that the proposed CPA is not the only alternative amongst those considered that is in compliance with mandatory regulations?					
B.2.4	Does the simple cost analysis demonstrate that without CDM revenue the CPA is not a financially attractive option?					
B.2.5	Does the barrier analysis demonstrate that the project activity faces significant barriers that are overcome through the CDM?					
B.2.6	Are there essential differences between the CPA and similar activities that are occurring?					
B.2.7	Is there any ODA that is directly used to finance the CPA (Gold Standard requirement)?					
B.2.8	Is there a technology transfer or knowledge innovation involved in the CPA (Gold Standard requirement)?					
B.3. Calculation of GHG Emission Reductions – Project emissions <i>It is assessed whether the project emissions are stated according to the methodology and the PoA-DD and whether the argumentation for the choice of default factors and values - where applicable – is justified.</i>						
B.3.1	Is the calculation of project emissions of the CPA					

CHECKLIST QUESTION		Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
	in accordance with the procedure described in the PoA-DD?					
B.3.2	Are CPA-specific conservative assumptions used when calculating the project emissions?					
B.3.3	Are CPA-specific uncertainties in the project emission estimates properly addressed?					
B.4. Calculation of GHG Emission Reductions – Baseline emissions <i>It is assessed whether the baseline emissions are stated according to the methodology and the PoA-DD and whether the argumentation for the choice of default factors and values – where applicable – is justified.</i>						
B.4.1	Is the calculation of baseline emissions of the CPA in accordance with the procedure described in the PoA-DD?					
B.4.2	Are CPA-specific conservative assumptions used when calculating the baseline emissions?					
B.4.3	Are CPA-specific uncertainties in the baseline emission estimates properly addressed?					
B.5. Emission Reductions <i>The emission reductions shall be real, measurable and give long-term benefits related to the mitigation of climate change.</i>						
B.5.1	Has it been demonstrated that the total emission reductions of the CPA of activities will be real, measurable and give long-term benefits related to the mitigation of climate change?					
B.6. Monitoring Plan <i>It is assessed whether the CPA correctly applies the monitoring plan of the PoA.</i>						
B.6.1	Is the monitoring plan for the CPA documented					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
according to the approved methodology, in accordance with the programme of activities and in a complete and transparent manner?					
B.6.2 Will all monitored data required for verification and issuance be kept for two years after the end of the crediting period or the last issuance of CERs, for this programme, whichever occurs later?					
B.6.3 Is the measurement method clearly stated for each GHG value to be monitored and deemed appropriate?					
B.6.4 Is the measurement equipment described and deemed appropriate?					
B.7. CPA Management Planning <i>It is checked that programme implementation is properly prepared for and that critical arrangements are addressed.</i>					
B.7.1 Is the authority and responsibility of overall CPA management clearly described?					
B.7.2 Are procedures identified for training of monitoring personnel?					
B.7.3 Are procedures identified for emergency preparedness for cases where emergencies can cause unintended emissions?					
B.7.4 Are procedures identified for review of reported results/data?					
C. Environmental impacts <i>It is assessed whether environmental impacts of the CPA have</i>			<input checked="" type="checkbox"/> Analysis at PoA level <input type="checkbox"/> Analysis at CPA level		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
<i>been properly addressed.</i>			This section must only be completed if the analysis of environmental impacts must be at CPA level.		
D. Stakeholders' comments <i>It is assessed whether stakeholders have been properly consulted in the development of the CPA.</i>			<input type="checkbox"/> Consultation at PoA level <input checked="" type="checkbox"/> Consultation at CPA level This section must only be completed if the analysis of environmental impacts is at PoA level.		
D.1.6. Have relevant stakeholders been consulted?					
D.1.7. Have appropriate media been used to invite comments by local stakeholders?					
D.1.8. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?					
D.1.9. Is a summary of the stakeholder comments received provided?					
D.1.10. Has due account been taken of any stakeholder comments received?					

APPENDIX C

CERTIFICATES OF COMPETENCE



CERTIFICATE OF COMPETENCE

Michael Lehmann

Qualification in accordance with DNV's Qualification Scheme CDM/JI (ICP-9-8-i1-CDMJ1-i1)

GHG Auditor:	Yes				
Technical Area	CDM Validator	CDM Verifier	Sector Expert	Methodology Expert	Technical Reviewer
<i>Landfill gas</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Renewables</i>					
<i>Hydro power</i>	Jan 2009	Jan 2009	Jan 2009		
<i>Wind power</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Other renewable</i>	Jan 2009	Jan 2009			
<i>Biomass</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Grid connection of isolated system</i>	Jan 2009	Jan 2009	Jan 2009	Jan 2009	Jan 2009
<i>Cement</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Waste-heat / waste-gas recovery</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Efficiency of thermal power plants</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Coal mine methane</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Fuel switch</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Manure management</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Waste / wastewater treatment</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Energy efficiency</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>N₂O</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>HFCs</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Flare reduction</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>PFCs</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Charcoal</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>CO₂ recovery</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Transport</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Non-renewable biomass</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Biofuel</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Pipeline leakage reduction</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>SF₆</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009

Høvik, 9 January 2009

Michael Lehmann

Michael Lehmann
Technical Director, Climate Change Services



CERTIFICATE OF COMPETENCE

Sergio Cabral

Qualification in accordance with DNV's Qualification Scheme CDM/JI (ICP-9-8-i1-CDMJ1-i1)

<i>GHG Auditor:</i>	Yes				
<i>Technical Area</i>	<i>CDM Validator</i>	<i>CDM Verifier</i>	<i>Sector Expert</i>	<i>Methodology Expert</i>	<i>Technical Reviewer</i>
<i>Landfill gas</i>					
<i>Renewables</i>					
<i>Hydro power</i>					
<i>Wind power</i>					
<i>Other renewable</i>					
<i>Biomass</i>					
<i>Grid connection of isolated system</i>					
<i>Cement</i>					
<i>Waste-heat / waste-gas recovery</i>					
<i>Efficiency of thermal power plants</i>					
<i>Coal mine methane</i>					
<i>Fuel switch</i>					
<i>Manure management</i>	Jan 2009	Jan 2009			
<i>Waste / wastewater treatment</i>					
<i>Energy efficiency</i>					
<i>N₂O</i>					
<i>HFCs</i>					
<i>Flare reduction</i>					
<i>PFCs</i>					
<i>Charcoal</i>					
<i>CO₂ recovery</i>					
<i>Transport</i>					
<i>Non-renewable biomass</i>					
<i>Biofuel</i>					
<i>Pipeline leakage reduction</i>					
<i>SF₆</i>					

Høvik, 9 January 2009

Michael Lehmann

Michael Lehmann

Technical Director, Climate Change Services



CERTIFICATE OF COMPETENCE

Barbara Lara

Qualification in accordance with DNV's Qualification scheme for CDM/JI (ICP-9-8-i1-
CDMJi-i1

<i>GHG Auditor:</i>	Yes		
<i>CDM Validator:</i>		<i>JI Validator:</i>	--
<i>CDM Verifier:</i>	--	<i>JI Verifier:</i>	--
<i>Industry Sector Expert for Sectoral Scope(s):</i>	--		

Høvik, 2 May 2008

Michael Lehmann

Michael Lehmann

Technical Director, Climate Change Services



CERTIFICATE OF COMPETENCE

Kumaraswamy Chandrashekara

Qualification in accordance with DNV's Qualification Scheme CDM/JI (ICP-9-8-i1-CDMJ1-i1)

<i>GHG Auditor:</i>	yes				
<i>Technical Area</i>	<i>CDM Validator</i>	<i>CDM Verifier</i>	<i>Sector Expert</i>	<i>Methodology Expert</i>	<i>Technical Reviewer</i>
<i>Landfill gas</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Hydro power</i>	Jan 2009	Jan 2009			
<i>Renewables</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Wind power</i>	Jan 2009	Jan 2009			
<i>Other renewable</i>	Jan 2009	Jan 2009			
<i>Biomass</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Grid connection of isolated system</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Cement</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Waste-heat / waste-gas recovery</i>	Jan 2009	Jan 2009	Jan 2009	Jan 2009	Jan 2009
<i>Efficiency of thermal power plants</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Coal mine methane</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Fuel switch</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Manure management</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Waste / wastewater treatment</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Energy efficiency</i>	Jan 2009	Jan 2009	Jan 2009	Jan 2009	Jan 2009
<i>N₂O</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>HFCs</i>	Jan 2009	Jan 2009	Jan 2009	Jan 2009	Jan 2009
<i>Flare reduction</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>PFCs</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Charcoal</i>	Jan 2009	Jan 2009	Jan 2009	Jan 2009	Jan 2009
<i>CO₂ recovery</i>	Jan 2009	Jan 2009	Jan 2009	Jan 2009	Jan 2009
<i>Transport</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Non-renewable biomass</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Biofuel</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>Pipeline leakage reduction</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009
<i>SF₆</i>	Jan 2009	Jan 2009		Jan 2009	Jan 2009

Høvik, 9 January 2009

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