
PoA Title	Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America
VPA Title	Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America – First VPA for Distribution of Dos por Tres Cookstoves in Honduras
Gold Standard reference	GS1988
ERM CVS Project Reference	2786.v1
Client Name	Proyecto Mirador, LLC
Client Address	919 Sir Francis Drake Blvd. Suite 201 Kentfield, CA 94904 USA

GS Validation Report: Renewal of Crediting Period

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Abbreviations

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CH ₄	Methane
CL	Clarification request
CME	Coordinating and Managing Entity
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
COP	Conference of the Parties
DNA	Designated National Authority
DOE	Designated Operational Entity
EIA	Environmental Impact Assessment
ER	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse Gas
GS	Gold Standard
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
MP	Monitoring Plan
NCV	Net Calorific Value
NGO	Non-Governmental Organisation
ODA	Official Development Assistance
PoA-DD	Programme of Activities Design Document
UNFCCC	United Nations Framework Convention on Climate Change
VPA	Voluntary Programme Activity
VVS	CDM Validation and Verification Standard

Project/Party specific abbreviations

ICS	Improved Cook stove
KPT	Kitchen Performance Test
NCV	Net Calorific Value
NRB	Non-Renewable Biomass

1 Project Information

1.1 Key project information


VPA Title	Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America – First VPA for Distribution of Dos por Tres Cookstoves in Honduras
PoA Title in which VPA is included	Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America
Date and version of the applicable PoA-DD	Version 06 dated 25 March 2016
Host Party	Honduras
Other Party(ies)	n/a
Project participants	Proyecto Mirador LLC, Proyecto Mirador Foundation

Methodology(ies) used	Technologies and Practices to Displace Decentralized Thermal Energy Consumption, Version 2.0
Methodological tool(s) used	n/a
Sectoral Scope(s) (as per http://cdm.unfccc.int/DOE/scopes.html)	Sectoral scope 3: Energy Demand

VPA Design Document submitted to DOE for validation of renewal of crediting period	Date: 01 October 2015	VPA Design Document Final Version submitted to GS for renewal of crediting period	Date: 25 March 2016
	Version Number: 02		Version Number: 06

First crediting period start and end date	The crediting period of the stand-alone project which later became the first VPA was 01 May 2009 – 30 April 2016 (Renewable). The stand-alone project became part of the PoA in 2014 and the end date of the crediting period remained the same
Second crediting period start and end date	01 May 2016 - 30 April 2023 (Renewable)
Estimated annual average emission reductions	426,606 tCO ₂ e

2 Summary and Validation Opinion

VPA Title	Proyecto Mirador Enhanced Distribution of Improved Cookstoves in Latin America – First VPA for Distribution of Dos por Tres Cookstoves in Honduras
Name of Client	Proyecto Mirador, LLC
Basis of validation	<p>ERM CVS based its validation work on:</p> <ul style="list-style-type: none"> • Gold Standard approved monitoring methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption, Version 2.0 • Gold Standard Rules v.2.1 and associated toolkit and guidance • CDM Validation and Verification Standard (version 09.0) • ERM CVS's internal validation methodologies and templates
Responsibilities of ERM CVS	ERM CVS is responsible to provide a thorough independent third party assessment of the GS VPA to ensure that the VPA meets identified and applicable criteria for crediting period renewal
Responsibilities of Project participants	The Project Participants are responsible for revising the VPA-DD, and providing supporting documentation to support the information included in the updated VPA-DD.
Activities performed	<p>ERM CVS conducted its activities in accordance with the CDM Validation and Verification Standard. The validation consisted of a review of project documentation, interviews with relevant personnel, cross checking information through other reliable sources and reporting. Validation work was based on a validation report template that sets out the relevant Gold Standard requirements for renewal of crediting period. Where necessary, Clarification Requests and Corrective Action Requests were raised and closed out with the Project participants. The validation work was subject to detailed Technical Review and assessment prior to submission.</p> <p>ERM CVS also undertook validation of the PoA renewal, which is reported in a separate validation report. No component of the project activity was excluded from the validation.</p>
ERM CVS Conclusion	<p>ERM Certification and Verification Services (ERM CVS) has performed the validation of the request for renewal of the VPA crediting period as set out by the Gold Standard in its Annex F. The validation employed standard auditing techniques, and addressed the requirements of the CDM Validation and Verification Standard.</p> <p>ERM CVS reassessed the validity of the original baseline and whether the emission reductions are in line with the methodology applied in the latest PoA-DD. Based on the work performed, it is ERM CVS's opinion that the PPs have correctly updated the sections of the VPA-DD relating to the baseline, emission reductions and monitoring plan, that the project activity meets the applicability criteria of the methodology, and that the methodology is correctly applied for the determination of the continued validity of the baseline and estimation of emission reductions, in line with the latest version of the PoA-DD.</p> <p>Therefore ERM CVS concludes that the VPA as described in the VPA Document Version 06 dated 25 March 2016, meets all necessary criteria and requirements for the renewal of the crediting period. ERM CVS therefore requests the renewal of the VPA's crediting period.</p>
Signed on behalf of ERM CVS	
Name:	Melanie Eddis
Date:	31 December 2015

3 Introduction

3.1 Validation Objectives

The objective of this validation is to provide a thorough independent third party assessment to determine whether the Project participants have correctly updated the VPA-DD and whether the VPA-DD meets the requirements for crediting period renewal, according to the latest guidance from the Gold Standard, as set out in the GS Requirements, Toolkit, and other relevant guidance. In particular, to reassess the validity of the original baseline or its update if baseline is set at the VPA level, to assess the correctness of the application of an approved methodology as applied in the latest version of the PoA-DD. The validation will result in a conclusion as to whether the request for VPA crediting period renewal should be submitted to the Gold Standard. The final decision on whether to renew the VPA's crediting period rests with the Gold Standard Foundation.

3.1.1.1 *Validation Criteria*

ERM CVS applies the following principles in performing its validation:

- Consistency
- Transparency
- Impartiality, independence and safeguarding against conflicts of interest
- Confidentiality

In all aspects of its work, ERM CVS ensures that the information and data reported are accurate, conservative, relevant, credible, reliable and complete.

3.2 Scope

The validation scope is defined as an independent and objective review of the updated VPA Design Document (VPA-PDD) and associated documentation against requirements for the renewal of the crediting period, according to the latest guidance from the Gold Standard. The validation scope also included an assessment of completeness and accuracy of documentation, evaluation of evidences, information and assumptions made in the VPA-DD and supporting documentation.

3.3 Contract Review

Prior to contracting with the client, a full review of the project and the validation requirements for renewal of the crediting period was made. This addressed both commercial risk and project risks associated with conducting the validation activities and confirmed the availability of an appropriately qualified team to conduct the validation.

3.4 Validation Personnel

Based on ERM CVS's review of the project, a validation team was established that takes into account the coverage of the technical area(s), sectoral scope(s) and relevant host country experience.

Personnel who were involved in the validation of this project activity were:

Validation Team

Name	Role	CDM and GS Requirements	Technical area	Participated in site visit?
Neringa Pumputyte	Lead Validator	Yes	Fully competent	N/A

DOE Head Office

Name	Role	CDM Requirements	Knowledge relevant to the technical area
Jonathan Avis	Technical Reviewer	Yes	Yes

3.5 Summary of CVs of the validation personnel

Neringa Pumputyte is a lead assessor and technical reviewer at ERM CVS, where she works on validations and verifications of CDM and Gold Standard projects and Programmes of Activities (PoAs), as well as assurance assignments. She has over 6 years of experience in climate change and GHG emission reductions, having worked as a consultant and project developer prior to joining ERM CVS. Neringa has successfully completed 7 validations of PoAs in the sectors of renewable energy, energy demand, and manufacturing; 5 Gold Standard verifications in the sector of energy demand; and worked on project validations in the sectors of landfill gas and fugitive emissions (oil and gas), as well as corporate GHG assurances. She has led development of the Gold Standard programme in ERM CVS. Before joining ERM CVS, Neringa worked on hydro, cook stove and animal waste handling projects as a project developer. Neringa has completed the ERM CVS CDM training, Gold Standard training, and GHGMI renewable energy training. Neringa also has a BSc and MSc in Geography, and an MSc in Environmental Change and Management from the University of Oxford.

Jonathan Avis is CDM Business Manager for ERM CVS, and a GHG Assessor and Technical Reviewer with over 10 years of experience in the CDM, Gold Standard and VCS. Since joining ERM CVS Jonathan has worked as a Technical Reviewer or GHG Assessor on more than 50 CDM validations in Renewable Energy (scope 1), more than 10 CDM validations in Manufacturing Industries (scope 04), 10 CDM validations in Mining (scope 8), and 10 CDM validations in Waste Handling and Disposal (scope 13). Jonathan's previous work experience involved screening and due diligence of carbon projects, Project Design Document (POA-DD & CPA-DD) development, quality assurance and technical review of CDM and GS project documentation, the development of carbon monitoring plans, and management of carbon projects through the validation, registration and verification stages. Jonathan has completed the ERM CVS CDM training as well as the GHGMI Renewable Energy training and Gold Standard training. Jonathan holds a BA in Geography and an MSc in Environmental Change and Management from the University of Oxford.

4 Validation Approach

In carrying out its validation work, ERM CVS has:

- (a) Determined whether the VPA complies with the Gold Standard requirements for renewal of the crediting period;
- (b) Assessed the claims and assumptions made in the updated VPA design document (VPA-DD) related to the validity of the baseline, emission reductions and monitoring plan. The evidence used in this assessment has not been limited to that provided by the project participants.

The validation was carried out in accordance with the most recent version of the VVS. The validation process employed standard auditing techniques and undertook necessary cross-checks and follow-up actions to ascertain the correctness of the information. The validation team included staff with experience in the relevant technical areas within the sectoral scope. The validation report and associated documents have undergone a thorough technical review by ERM CVS before being submitted to the CDM Executive Board for registration. The validation consisted of the following key stages:

- Review of documentation including VPA-DD, methodology and key supporting documents and references
- Interviews with personnel with project design and implementation knowledge
- Development of a draft validation report, identifying non-compliances including Corrective Action Requests (CARs) and Clarification Requests (CLs)
- Resolution of outstanding issues (CARs and CLs) and development of a final validation report and validation opinion
- Independent technical review and report approval

4.1 Document Review

A detailed document review of the VPA-DD, methodology and all other associated documentation and references took place. The document review includes:

- A review of data and information to verify the correctness, credibility and interpretation of presented information;
- Cross checks between information provided in the VPA-DD and information from other sources, not limited to those provided by the PPs, applying ERM CVS's sectoral or local expertise and, if necessary, with independent background investigations
- Reference to available information relating to projects or technologies similar to the proposed project activity
- Review, based on the approved methodology being applied, of the appropriateness of formulae and accuracy of calculations

A list of all documents reviewed or referred to in the course of this validation is included in Appendix A.

4.2 Interviews

Interviews provide additional and background to the project as well as cross checks with project documentation. Telephone Interviews were undertaken with the project owner.

4.3 Preparation of Draft Validation Report

Based on the findings of the desk review, ERM CVS prepared a draft validation report including a list of CARs and CLs, and provided this to the PPs. Where issues are identified that need to be further elaborated, researched or added to in order to confirm that the project activity meets the Gold Standard requirements for renewal of the crediting period, ERM CVS identified these issues in the DVR so that they could be discussed with the PPs and concluded upon in the final validation report (FVR).

Remediation requests

Where issues were identified, ERM CVS raised one of the following remediation requests:

Clarification Request (CL): where information is insufficient or not clear enough to determine whether the applicable Gold Standard requirements have been met.

Corrective Action Request (CAR): where:

- Mistakes have been made that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
- The Gold Standard requirements have not been met; or
- There is a risk that emission reductions cannot be monitored or calculated.

Forward Action Requests (FAR): where it was necessary to highlight issues related to project implementation that require review during the subsequent verification of the project activity.

CARs and CLs must be 'closed out' before the validation can be concluded. Close out is only possible where the PPs modify the project design, rectify the VPA-DD or provide adequate additional explanation or evidence that satisfies ERM CVS's concerns. The validation process may be halted until the CARs and CLs are addressed to the validation team's satisfaction.

4.4 Final Validation Report and Validation Opinion

The final validation report (FVR) is completed when the CARs and CLs have been closed out to the satisfaction of ERM CVS. The FVR includes the validation opinion that sets out the validation conclusion regarding the compliance of the project with Gold Standard requirements.

4.5 Internal Quality Control

The process of validation and decision of the validation team has been subject to an independent Technical Review. The scope of the Technical Review process is to independently assess that all procedures have been followed, necessary requirements have been met, and all conclusions are justified. The final validation decision is based on the findings and conclusions of the validation team, assessing the compliance of the project activity with the Gold Standard requirements, and the technical evaluation of the independent technical reviewer. The final report is then reviewed and approved by the qualified signatory / final decision maker within ERM CVS.

Validation findings – VPA-DD

4.6 VPA Design Document (VPA-DD)

The renewal of the crediting period requires the VPA-DD to be updated, therefore ERM CVS reviewed the updated VPA-DD to determine whether it has been prepared in accordance with the latest VPA-DD form (template) and guidance.

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/CAR/ CL	Final OK/ NOT OK
4.6.1	Has the PP updated the sections of the PDD related to the baseline, estimated GHG emission reductions, and the monitoring plan?	The PP has updated the sections of the VPA-DD related to the baseline, methodological choices, estimated GHG emission reductions, and monitoring plan. In addition, argumentation was provided why local stakeholder consultation was not repeated for the renewal of the crediting period. Please refer to the section 9 for information how this approach was validated.	OK	OK
4.6.2	Is the updated PDD prepared in accordance with the latest forms and guidance required by the CDM EB? http://cdm.unfccc.int/Referenc	The updated VPA-DD is prepared in accordance with the latest form of the CPA-DD available on the CDM website and in accordance with the instructions provided in the appendix to the form.	OK	OK

Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/CAR/ CL	Final OK/ NOT OK
e/PDDs_Forms/PDDs/index.html			

Conclusion

ERM CVS has confirmed that the PDD has been updated in accordance with the latest relevant forms and guidance.

4.7 Project Description

Description of the VPA

The VPA activities consist of dissemination of Dos por tres cookstoves to those households in Honduras that in the pre-project scenario are using a traditional and inefficient fogon stove. The distribution model includes entrepreneurs called ejecutores who are trained by Proyecto Mirador and organise and implement stove building. Their performance is monitored and evaluated by Proyecto Mirador, and more stoves are commissioned to those ejecutores who perform better.

The Dos por tres stove model was developed by modifying a La Justa stove model and includes plancha (steeltop) in line with the local cooking practices. The project provides the plancha, chimney, chimney top, six custom ceramic pieces for the stove mouth or firebox, and the installation and training for free. The beneficiary households contribute by purchasing cement, rebar, bricks, adobe blocks, and/or wood ash.

Description of baseline scenario

The baseline is the continued use of traditional fogon stoves.

The renewal of the crediting period requires the project participants to update the sections of the PDD (in this case VPA-DD) relating to the baseline, using the latest approved version of the methodology, and applying the Tool for the Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period. The PPs shall assess and incorporate the impact of national and/or sectoral policies existing at the time of requesting renewal of the crediting period on the current baseline GHG emissions, without reassessing the baseline scenario. Therefore ERM CVS validated whether the updated PDD contains a clear description of the baseline scenario that enables the emission reductions resulting from that scenario to be assessed. Please refer to the section 7.1 of this report for this validation.

Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
4.7.1 Is there a clear description of the baseline scenario in the revised PDD?	<p>Based on interviews with the representative of Proyecto Mirador, stoves are only built in households which prior to the project activity have been using the traditional fogon stove. Each ejecutore has some staff that includes a designated inspector. One of the duties of the inspector is to visit households before installation, to inspect the location and conditions for installation and to check the baseline stove use. If there is stove mixing, the households are asked what the other stoves are used for. If other stoves are used e.g. just for tea and coffee then such a household can get the project stove. If those other stoves are used for main cooking then such a household is not eligible. Such process substantiates the statement in the VPA-DD that the baseline is defined based on the assumption that, in the absence of Mirador's activity, the households would continue to utilize the traditional fogon stove.</p> <p>The assessment of the validity of the originally identified baseline has been provided in the VPA-DD. As no laws or regulations applicable to stove use in households have been adopted, and stoves under the VPA are built only in households that use fogon stove, the original baseline scenario remains applicable. Step 1.4 of the tool requires updating the values of the baseline</p>	OK	OK

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
		parameters. The same requirement is stated in the methodology. Please refer to section 6 for validation of the baseline.		

Conclusion

The PDD contains a clear description of the baseline scenario.

5 Validation findings –Methodology

ERM CVS has evaluated the baseline and monitoring methodology applied by the PPs in the updated VPA-DD to confirm its applicability, and whether or not it has been appropriately applied for the calculation of emission reductions and in the monitoring plan.

5.1 Validity of selected methodology and methodological tools

As per the Gold Standard Toolkit Annex F, at the time of the crediting period renewal VPAs have to be updated to use the version of the methodology applied in the latest applicable version of the PoA-DD in which the VPA is included.

The PoA's crediting period is being renewed at the same time as this VPA's crediting period. The PoA-DD, and thus the VPA-DD have applied the following methodology for the renewal of the crediting period:

Baseline methodology applied	Technologies and Practices to Displace Decentralized Thermal Energy Consumption, Version 2.0
Methodological tools applied as required by the methodology	n/a

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
5.1.1	<p>Are the number, title and version of the approved methodology clearly and correctly stated?</p> <p>Is the latest version of the methodology valid at the time of submission of the revised PDD for the renewal of the crediting period used?</p> <p>Is the methodology within its period of validity?</p>	<p>As ERM CVS is validating crediting period renewals for the PoA and the VPA at the same time, it confirms that the VPA-DD uses the same version of the methodology as the PoA-DD. The validity of the selected methodology is further validated in the POA crediting period renewal validation report.</p>	OK	OK
	<p>Are all the required tools applied and fully referenced in the PDD?</p> <p>Are the version numbers applicable at the time of validation?</p>	<p>The methodology does not refer to any methodological tools.</p>	OK	OK

Conclusion

The applied methodology and associated methodological tools have been correctly described, are approved by the Gold Standard, and are in line with the methodology applied in the latest version of the PoA-DD.

5.2 Applicability of the selected methodology to the project activity

ERM CVS evaluated whether the selected baseline and monitoring methodology applied is applicable to the project activity. This evaluation was based on a review of the VPA-DD and associated documentation. ERM CVS has validated that the applicability conditions of the methodology (and tools, where relevant) are met and that the project activity is not expected to result in emissions other than those allowed by the methodology.

ERM CVS has assured the compliance of the project activity with each of the applicability conditions of the selected methodology and tools:

	Applicability Conditions in methodology and/or tools	Is this condition discussed in the PDD? (yes/no)	Does the project meet this condition? (Yes/No, or state that this condition is not relevant for the project)	Validation findings (including justification and substantiation of information, data and evidence).	Draft OK/ CAR/CL	Final OK/ Not OK
5.2.1	This methodology is applicable to programmes or activities introducing technologies and/or practices that reduce or displace greenhouse gas (GHG) emissions from the thermal energy consumption of households and non-domestic premises	No	Yes	The technology included in the VPA – improved cookstoves – is among the examples of technologies to which this methodology is applicable.	OK	OK
	Shifts in technology may occur in a gradual manner and adoption can increase over the project period. The project activity is implemented by a project proponent and can include additional project participants. The individual households and institutions do not act as PPs	No	Yes	ERM CVS can confirm based on validated description of the VPA the stoves are continuously sold over the lifetime of the VPA. Only Proyecto Mirador acts as a project participant. However CL 1 was raised because section D.2 does not demonstrate how applicability conditions of the methodology were met in line with the PoA-DD. Section D.2 of the amended VPA-DD now includes a description how the VPA meets methodology's applicability conditions, with justifications provided, and CL 1 was closed.	CL 1	OK
	The project boundary needs to be clearly identified, and the technologies counted in the project are not included in any other voluntary market or CDM project activity. In some cases there may be another similar activity within the same target area. Project proponents must therefore have a survey mechanism in place together with appropriate mitigation measures so as to prevent any possibility of double counting	No	Yes	Please refer to CL 1. In addition, the PP is requested to clarify whether other voluntary market or CDM project or programme activities involving efficient stoves are implemented in Honduras and whether a survey mechanism is in place to prevent any possibility of double counting. The CL 1 was closed after the VPA-DD was amended and justification provided on why there is no possibility of double counting associated with other CDM or VER projects implemented in Honduras – please see Appendix B for further details.	CL 1	OK

	Applicability Conditions in methodology and/or tools	Is this condition discussed in the PDD? (yes/no)	Does the project meet this condition? (Yes/No, or state that this condition is not relevant for the project)	Validation findings (including justification and substantiation of information, data and evidence).	Draft OK/ CAR/CL	Final OK/ Not OK
	The technologies each have continuous useful energy outputs of less than 150kW per unit (defined as the total useful energy delivered from start to end of operation of a unit divided by time of operation).	No	Yes	The VPA involves only one stove model. Its compliance with the energy output threshold was confirmed at the time of the VPA inclusions and does not need to be re-visited.	OK	OK
	<p>Using the baseline technology as a backup of auxiliary technology in parallel with the improved technology introduced by the project activity is permitted as long as a mechanism is put into place to encourage the removal of the old technology and the definitive discontinuity of its use.</p> <p>The project documentation must provide a clear description of the approach chosen and the monitoring plan must allow for a good understanding of the extent to which the baseline technology is still in use after the introduction of the improved technology. The success of the mechanism put into place must therefore be monitored, and the approach must be adjusted if proven unsuccessful.</p>	Yes	Yes	<p>This was to be validated following the closure of CL 01 in the PoA validation report.</p> <p>CL 1 in the PoA renewal validation report was closed after confirming based on review of the leakage and monitoring survey questionnaire /06/ and the latest verification report for this PoA /07/, that the survey includes appropriate questions which allow monitoring the effectiveness of the efforts made during the installation to ensure removal of traditional stove.</p>	PoA CL 1	OK
	The project proponent must clearly communicate to all project participants the entity that is claiming ownership rights of and selling the emission reductions resulting from the project activity	Yes	Yes	The way how Proyecto Mirador communicates emission reduction ownership rights is clearly described in the section A.3 of the CPA-DD, and the approach is reasonable based on ERM CVS's sector knowledge.	OK	OK
	Project activities making use of a new biomass feedstock in the project situation [...]	n/a	n/a	Not applicable as the feedstock in the project and baseline situations is the same (woody biomass).	OK	OK

Conclusion

The applied methodology and associated tools are fully applicable to the project activity and is correctly applied in the VPA-DD.

5.3 Project Boundary

As per VVS section 7.12.5, ERM CVS reviewed the description of the project boundary in the VPA-DD, to determine whether all main GHG emission sources, the physical delineation of the proposed project activity and other relevant project and baseline emission sources covered in the methodology are included within the project boundary for the purpose of calculating project and baseline emissions for the proposed activity.

According to the methodology applied in the applicable PoA-DD, the project boundary is the physical, geographical sites of the project technologies. This boundary could also host the baseline and project fuel collection and production (e.g. charcoal, plant oil) and solid waste and effluents disposal or treatment facilities associated with fuel processing.

Emission sources

The emissions sources included in or excluded from the project boundary, as set out in the applied methodology and in the PoA-DD are as follows:

	Source	Gas	Is this source included within the project boundary in the PDD?	Is inclusion / exclusion from the project boundary justified in the PDD?	How has this been validated?
Baseline emissions	Heat delivery, production of fuel, and transport of fuel	CO ₂	Yes	Yes	As per methodology - this is important source of emissions
		CH ₄	Yes	Yes	As per methodology – this is important source of emissions
		N ₂ O	Yes	Yes	As per methodology – this can be significant for some fuels
Project emissions	Heat delivery, production of fuel, and transport of fuel	CO ₂	Yes	Yes	As per methodology - this is important source of emissions
		CH ₄	Yes	Yes	As per methodology – this is important source of emissions
		N ₂ O	Yes	Yes	As per methodology – this can be significant for some fuels

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
5.3.1	Has the PDD justified the inclusion/exclusion of all potential sources of GHG emissions as set out in the applied baseline methodology	Based on review of the VPA-DD against the PoA-DD and the methodology, the sources and GHGs included within the project boundary in the VPA-DD are in line with the applied methodology	OK	OK

Conclusion

The identified boundary and the selected sources and gases included in the final VPA-DD are appropriately described and justified for the project activity, in accordance with the applied methodology. The information is correctly described in the section D.3 of the VPA-DD.

Physical delineation of the project

ERM CVS evaluated whether the VPA-DD correctly describes the physical delineation of the proposed project activity, including which installations/processes are included within the geographical boundary of the project activity.

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
5.3.2	Does the PDD correctly describe the project boundary, including the physical delineation of the proposed CDM project activity included within the project boundary?	The physical boundary of the VPA remains as the one in the first crediting period. The stoves are implemented in households throughout the VPA's geographical boundary, i.e. in Honduras, and the fuel collection area also mirrors the boundary of the VPA.	OK	OK
	Were any emission sources identified that will be affected by the project activity and are not addressed by the selected approved methodology? If so, was clarification of, revision to or deviation from the methodology approved in accordance with required procedures.	No emissions sources other than those addressed by the methodology were identified.	OK	OK

Conclusion

The VPA-DD correctly describes the project boundary, including the physical delineation of the proposed project activity, in compliance with the requirements of the selected baseline methodology, and this is consistent with documentation provided. All sources and GHGs required by the methodology have been included within the project boundary. Where the methodology allows PPs to choose whether a source or gas is to be included within the project boundary, the PPs have sufficiently justified that choice. The project boundary is justified for the project activity, based on ERM CVS's local and sectoral knowledge.

6 Validation findings – Baseline and emission reductions

As per VVS section 7.12.6, ERM CVS reviewed the VPA-DD to assess whether it correctly identifies the baseline for the project activity, defined as the scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed project activity. In line with the Gold Standard Toolkit Annex Z at the time of the crediting period renewal, the validity of the original baseline has to be assessed and baseline updated by carrying out an assessment as per the latest version of the “Tool to assess the validity of the original/current baseline and to update the baseline at the renewal of a crediting period”.

6.1 Baseline identification

The baseline identification has been validated as follows:

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
6.1.1	Does the PDD identify the baseline, a scenario that represents the anthropogenic emissions by sources of GHG that would occur in the absence of the proposed project activity?	The baseline is identified as a continued use of the traditional fogon stoves. The validation of the assessment of validity of the originally identified baseline and updated baseline parameters is provided below, as well as validation of how the PP applied methodology requirement for the fuel consumption and other aspects of the baseline to be re-assessed at the renewal of the crediting period.	OK	OK
	Does the identified baseline conform to an allowed baseline under the applied methodology?	Yes, the identified baseline is in line with an allowed baseline under the applied methodology.	OK	OK

Conclusion

The revised PDD describes the baseline, and the baseline conforms to an allowed baseline under the applied methodology.

6.2 Assessment of the validity of the original/current baseline

In accordance with the project standard, paragraph 290, Project Participants shall assess and incorporate the impact of national and/or sectoral policies and circumstances existing at the time of requesting renewal of the crediting period on the current baseline GHG emissions, without reassessing the baseline scenario. Where data and parameters used for determining GHG emission reductions that are determined ex ante (and not monitored during the crediting period) are no longer valid, project participants shall update such data and parameters. The validity of the baseline and the parameters determined ex-ante shall be assessed in accordance with the ‘Tool to assess the validity of the original/current baseline and to update the baseline at the renewal of a crediting period’. Each step of the tool was validated as follows:

Step 1: Assess the validity of the current baseline for the next crediting period

The Procedures for the renewal of the crediting period of a registered CDM project activity approved by the CDM Executive Board require assessing the impact of new relevant national and/or sectoral policies and circumstances on the baseline. The validity of the current baseline is assessed using the following Sub-steps:

Step 1.1: Assess compliance of the current baseline with relevant mandatory national and/or sectoral policies

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
6.2.1	Have any new national and/or sectoral policies or regulations entered into force since the time of registration of the	ERM CVS has checked the website of the Honduran secretariat for natural resources and the environment (http://cambioclimaticohn.org/?cat=1015&title=Legislaci%F3n&lang=es), and can confirm that no legislation has been adopted that could have an impact on the	OK	OK

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
	project activity that could have an impact on the baseline or GHG emission reductions? Please list.	baseline or project emissions of the PoA in Honduras.		
	Does the current baseline (used in the registered PDD for the first crediting period) comply with all relevant mandatory national and/or sectoral policies applicable at the time of requesting renewal of the crediting period?	There are no mandatory national and/or sectoral policies applicable to the use of cooking devices in households.	OK	OK
	<i>If the current baseline does not comply with relevant mandatory national and/or sectoral policies, have the PPs assessed, based on the examination of current practice in the country or region in which the policies apply, whether those policies are systematically not enforced and that non-compliance with those requirements is widespread in the country or region?</i> How was this validated?	Not applicable	OK	OK
	If the current baseline is not in compliance with the relevant mandatory national and/or sectoral policies or if it cannot be shown that the policies are systematically not enforced and that non-compliance with those policies is widespread in the country or region, has the PP updated the baseline, as required by the tool?	Not applicable	OK	OK

Step 1.2: Assess the impact of circumstances

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
6.2.2	Have the PPs: <ul style="list-style-type: none"> assessed the impact of circumstances existing at the time of requesting renewal of the crediting period on the current baseline emissions (without reassessing the baseline scenario); evaluated whether the 	The assessment in the VPA-DD mentions that there has been an increase in the number of stove projects in Honduras but it still concludes that the effect is negligible. Please refer to CL 2 raised below, and how it was closed.	CL 2	OK

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
	<p>conditions used to determine the baseline emissions in the previous crediting period are still valid</p> <ul style="list-style-type: none"> assessed the availability of new fuels or raw materials and the impact of electricity or fuel prices in the identification of the current practice for the baseline emissions 			
	<p>If the baseline scenario identified in the registered PDD was the continuation of the current practice without any investment, have the PPs undertaken an assessment of the changes in market characteristics on the baseline?</p>	<p>No, the PP has not undertaken an assessment of the changes in market characteristics on the baseline – CL 2 was raised to provide further substantiation including the current total penetration of new stoves from various projects, and substantiation how the baseline is projected not to change over the 7-year crediting period, i.e. that households would be unlikely to buy an efficient stove in the absence of this project activity.</p> <p>A comprehensive description was added to the analysis on the changes in market characteristics, which describes other projects and initiatives that distribute/install/sell improved cookstoves. The information was validated as follows:</p> <p>As confirmed by checking the website of Stove Team /13/, the Stove Team model focuses on helping set up factories that produce efficient stoves and employ locals to help with stove distribution, bookkeeping and sales. As of December 2015 the Stove Team have 6 factories in the region, 1 of which is located in Honduras – that's the E'Copan factory located in Copan Ruinas (Western Honduras) that began production in July 2010 and to date has sold more than 5,500 stoves.</p> <p>ERM able to find public information about the number of stoves produced and sold by ADHESA (Honduran Association for Development) only from the year 2009. Considering that the Mirador project started operations in 2009, post-2009 information would be more relevant but appears to be not available indicating that numbers may not be large. Hence PP's estimate of 2,000 stoves is considered valid.</p> <p>Based on an article on the Honduran government website /14/, 52,000 families have received efficient stoves by September 2015, and the government planned to distribute further 50,000 stoves by the end of 2015. The stoves are subsidised by the government. No information is available yet on the extent to which the stoves are adopted and used.</p> <p>As confirmed by reviewing the website of the Climate Investment Funds /15, 16/, the SREP Investment Plan for Honduras was approved in 2011 which includes Sustainable Rural Energization programme that plans to give access to efficient cookstoves for 50,000 households. According to the website, in 2013 funding was approved for this sustainable rural energisation project to focus on building enabling market conditions and strengthening a network of rural enterprises to promote, build, distribute, maintain and supervise the installation and proper use of clean cookstoves. No evidence was found that the project has started implementation, and it is reasonable to assume that the target of 50,000 stoves will be reached no sooner than in a couple of years' time.</p> <p>Using the above information it can be assumed that to date in parallel with Mirador project implementation 5,500 stoves were sold via Stove Team International, 2,000 stoves via ADHESA, and 52,000 stoves via the government. Therefore the total was around 59,500 stoves.</p> <p>The PP's statement that there are at least 500,000 rural households in Honduras</p>	CL 2	OK

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
		<p>was validated as follows: the World Bank data suggests Honduras population is 7.962 million and the UNICEF data says 53% of the population is urban /17,18/. Assuming the average household size of 6, there are over 600 thousand rural households in Honduras.</p> <p>Using the PP's estimate of 500,000 rural households, and assuming that all stoves sold to date via initiatives other than Mirador were sold to rural households and that all of them were adopted (which is conservative) these account for about 12% of the rural population. According to the World Bank , more than two thirds of the population live in poverty, and are therefore considered unlikely to be able to afford an improved stove without a subsidy. This still leaves the majority of the rural households in need of subsidised efficient stoves.</p> <p>Considering that the VPA only installs project stoves in households that are confirmed to have been using fogon stoves before buying dos por tres, the argument is reasonable that no double counting will occur in relation to other efficient stove projects.</p> <p>CL 2 was therefore closed</p>		
	<p>If the new circumstances make a continued validity of the current baseline not plausible, then has the PP updated the baseline for the subsequent crediting period?</p> <p>How has this updated baseline been validated?</p>	<p>This was pending on closure of CL 2. Please see the line above on how it was closed</p>	CL 2	OK

Step 1.3: Assess whether the continuation of use of current baseline equipment(s) or an investment is the most likely scenario for the crediting period for which renewal is requested

This sub-step should only be applied if the baseline scenario identified at the validation of the project activity was the continuation of use of the current equipment(s) without any investment, and the project proponents or third party (or parties) would undertake an investment later due, for example, to the end of the technical lifetime of the equipment(s) before the end of the crediting period or the availability of a new technology.

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
6.2.3	<p>Is the baseline scenario in the registered PDD:</p> <ul style="list-style-type: none"> the continuation of use of the current equipment(s) without any investment; <u>and</u> the project proponents or third party (or parties) would undertake an investment later due, for example, to the end of the technical lifetime of the equipment(s) before the end of the crediting 	<p>The step 1.3 of the assessment was not done in line with the latest version of the Tool – CL 3 was raised.</p> <p>The CL 3 was closed after the step 1.3 was revised in the updated VPA-DD and was confirmed to be done in accordance with the Tool "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period".</p> <p>The baseline scenario in the registered VPA is the continued use of traditional (fogon) stoves. In the absence of this VPA the households are unlikely to make the full investment needed to get new efficient stoves.</p>	CL 3	OK

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
	<p>period, or the availability of a new technology?</p> <p>If not, then the rest of this step is not applicable.</p>			
	<p>Have the PPs assessed whether the remaining technical lifetime of the equipment that would have continued to be used in the absence of the project activity exceeds the crediting period for which renewal is requested?</p> <p>How was this validated?</p>	<p>This was pending on CL 3. The CL 3 was revised after the step 1.3 was revised in the updated VPA-DD and was confirmed to be done in accordance with the Tool. The baseline stoves do not really have an established lifetime – it can vary widely and these traditional fogon stoves can be refurbished or easily built again as they are cheap low cost solutions.</p> <p>So part of physical old stoves may break down before the expiry of the crediting period they would most likely be replaced by the same traditional low-cost stoves in the absence of subsidised stoves. According to the World Bank data /17/, 63% of the population live in poverty, with about 19% living in extreme poverty. The efficient stoves sold without subsidies such as the ones manufactured at the Stove Team’s factory or the ADHESA ones cost over 50 USD per stove and are not likely to be affordable to a large part of the rural population. The traditional fogon stove is a simple low-skilled and cheap solution therefore would continue to be the baseline stove for the population targeted by the VPA. It cannot be reasonably projected that investments into efficient stoves would be made during the next crediting period by households targeted by the VPA.</p>	CL 3	OK
	<p>If the baseline scenario of the project activity is the continuation of use of the current equipment(s) without any investment and the projects proponents or third party(ies) will undertake an investment later, but before the end of a crediting period, then the current baseline needs to be updated for that crediting period or the crediting of emission reductions should be limited to the period before the baseline equipment would cease its operation.</p> <p>Has this been done in the case of the project?</p>	<p>This was pending on CL 3. The CL 3 was revised after the step 1.3 was revised in the updated VPA-DD and was confirmed to be done in accordance with the Tool. As explained above, it cannot be reasonably projected that investments into efficient stoves would be made during the next crediting period by households targeted by the VPA.</p>	CL 3	OK
	<p>Have the PPs taken into consideration the market penetration of different technologies. Have the PPs evaluated the penetration rate of different technologies that are available in the market and evaluate how they could affect the baseline?</p> <p>How was this validated?</p>	<p>This was pending on CL 3. The CL 3 was revised after the step 1.3 was revised in the updated VPA-DD and was confirmed to be done in accordance with the Tool.</p> <p>Market penetration of different new stoves was assessed as part of step 1.2 and is validated above.</p>	CL 3	OK

Step 1.4: Assessment of the validity of the data and parameters

The Tool requires PPs to assess whether data and parameters that were only determined at the start of the crediting period and not monitored during the crediting period are still valid or whether they should be updated. Updates should be undertaken in the following cases:

- Where IPCC default values are used, the values should be updated if any new default values have been adopted and published by the IPCC, for example, in guidelines for national GHG inventories, IPCC assessment report or special reports by the IPCC;
- Where emission factors, values or emission benchmarks are used and determined only once for the crediting period, they should be updated, except if the emission factors, values or emission benchmarks are based on the historical situation at the site of the project activity prior to the implementation of the project and can not be updated because the historical situation does not exist anymore as a result of the CDM project activity.

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
6.2.4	Where IPCC default values were used as ex-ante parameters related to the baseline and new default values have been adopted and published by the IPCC, have the PPs updated those values in the revised PDD?	<p>ERM CVS was not able to validate the emission factor values for CH₄ and N₂O by checking against the sources. CL 4 was raised to clarify how the emission factors of CH₄ and N₂O as expressed in tCO₂e/TJ were obtained, by showing separately the values of EF in t of the relevant GHG per TJ and the values of GWP for each gas.</p> <p>The CL 4 was closed after further information was provided and ERM CVS was able to validate that the emission factors are correct, and the updated of GWP for methane for the second commitment period has been used /10, 12/.</p>	CL 4	OK
	Where emission factors, values or emission benchmarks are used and determined only once for the crediting period, have they been updated?	<p>The value for the NCV of the baseline fuel in the original VPA-DD was taken as an NCV for red oak from a publication from 1980, and the value was not updated and no justification provided. Further, the methodology specifies the default value that should be used, and the value used for the VPA is not in line with the one specified in the methodology. CAR 1 was raised.</p> <p>The CAR 1 was closed after PP provided justification and this was checked by ERM CVS – please refer to Appendix B for further details.</p> <p>The methodology applied for the VPA specifies that whenever the project proponents apply for a renewal of the crediting period the baseline must be re-assessed. As per methodology, the baseline is defined by typical fuel consumption among the target population prior to adopting the project technology, and the baseline studies that are to be done include (a) baseline non-renewable biomass (NRB) assessment, (b) baseline study, and (c) baseline fuel consumption.</p> <p>(a) NRB fraction was not updated and explanation provided – please refer to the section on monitoring parameters below for validation</p> <p>(b) It is not clear from the VPA-DD if the PP has conducted an updated survey on a sample of end users without project technology that are representative of end users targeted for the project (e.g. from a pre-sales list for further installation of project stoves). CL 5 was raised</p> <p>The CL 5 was closed after further explanation was provided and validated. The latest sets of kitchen surveys on baseline households were conducted in 2013-2014 and in 2015 in areas which the project was expanding to. The results showed that baseline conditions in those areas are in line with those surveyed at the start of project implementation. As these surveys were done recently it is reasonable that new set of baseline surveys was not conducted.</p> <p>(c) The baseline fuelwood consumption value was originally defined in kitchen performance tests (KPTs) conducted in 2010 and then in the secondary baseline study conducted in 2013. No further update was done for the renewal of the crediting period. CL 6 was raised to clarify the following aspects:</p> <ul style="list-style-type: none"> • Justification why the baseline fuel consumption was not re-assessed 	CAR 1 CL 5 CL 6	OK

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
		<p>now at the time of the renewal of the crediting period</p> <ul style="list-style-type: none"> It is not clear which set of tests – from 2010 or 2013 – is used as the source for fuelwood consumption. What sampling method and sampling frame were used to select the sample for the KPT, and justification that it ensured the sample is representative of the total population. Which option for the statistical analysis was used as defined in the methodology applied for the second crediting period? Please provide results of the statistical testing <p>CL 6 was closed after the PP provided clarification and changed the description in the VPA-DD. The description is now clear that the results of baseline KPT tests from 2010 are used in calculation of ERs, whilst the additional surveys and tests were aimed at confirming that the data from 2010 can continue to be used. Considering that the last time the justification for the continued validity of the original baseline KPT results was done is 2015, i.e. this year, ERM CVS accepts that the data from the 2010 KPT tests for the baseline fuelwood use can be used.</p> <p>The excel spreadsheets were reviewed with the baseline and project KPT data, and with the analysis of which combinations of baseline and project results satisfy or do not satisfy the 90/30 rule. Currently not all age groups satisfy the rule if data per capita is analysed, but the household level savings data satisfy the rule, and in most cases the data per person-meal also satisfies the rule. The explanation is found reasonable that this is affected by higher variability in household size, and the further addition of project KPT tests will likely increase the accuracy. Therefore it is likely that in the next issuance the results per person meal will satisfy the 90/30 rule for all age groups.</p>		

Step 2: Update the current baseline and the data and parameters

This step is only applicable if any of the steps above showed that the current baseline needs to be updated.

Step 2.1: Update the current baseline

This step is required if any of the steps 1.1, 1.2 or 1.3 indicate that the baseline should be updated. In such case the PP is required to update the current baseline emissions for the subsequent crediting period, without reassessing the baseline scenario, based on the latest approved version of the methodology applicable to the project activity. The procedure should be applied in the context of the sectoral policies and circumstances that are applicable at the time of request for renewal of the crediting period.

This step was not required because the steps 1.1-1.3 did not indicate the need to update the baseline.

Step 2.2: Update the data and parameters

If the application of Step 1.4 showed that the data and/or parameter(s) that were only determined at the start of the crediting period and not monitored during the crediting period are not valid anymore, project participants should update all applicable data and parameters, following the guidance in Step 1.4.

The updated parameters are validated in section 7.3 below.

6.3 Data and Parameters set Ex-ante

ERM CVS conducted validation activities to determine whether the equations and parameters have been correctly applied by comparing them to those in the selected approved methodology, and the evidence used to support each value. Where the methodology provides for selection between different options for equations or parameters, ERM CVS confirmed that adequate justification has been provided (based on the choice of the baseline scenario, context of the proposed project activity and other evidence provided) and that the correct equations and parameters have been used, in accordance with the methodology selected.

ERM CVS verified the justification given in the VPA-DD for the choice of data and parameters used in the equations. ERM CVS assessed that all data sources and assumptions are appropriate and calculations are correct, applicable to the proposed project activity and will result in a conservative estimate of the emission reductions. Each parameter required by the methodology and the generic CPA in the PoA-DD is listed and validated in detail as follows:

Parameter required as per meth / tools	Description of parameter (as per meth/ tools)	Included in revised PDD?	Title & description in revised PDD in line with meth/ tools?	Data unit correctly expressed in revised PDD?	Value needs to be re-assessed?	Value in revised PDD correct & provides for conservative estimate of Emission Reductions? How was this validated?	Measurement method correctly described in revised PDD (if applicable)
NCV _{b,fuel}	Net calorific value of the fuel that is substituted or reduced (IPCC default for wood fuel, 0.015 TJ/ton)	Yes	Yes (just without 'b' indicating baseline scenario, as there is just one baseline scenario)	Yes	Yes	The value for the NCV of the baseline fuel in the original VPA-DD was taken as an NCV for red oak from a publication from 1980, and the value was not updated and no justification provided. Further, the methodology specifies the default value that should be used, and the value used for the VPA is not in line with the one specified in the methodology – please see CAR 1. The CAR 1 was closed after the PP provided justification for continuing to use the same NCV value as the one used in the first crediting period. Please see Appendix B for further details.	n/a
EF _{b,fuel,CO2}	CO ₂ emission factor of the fuel that is substituted or reduced. 112 tCO ₂ /TJ for wood/wood waste, or the IPCC default value of other relevant fuel	Yes	Yes (just without 'b' indicating baseline scenario, as there is just one baseline scenario)	Yes	No	Yes – in accordance with the default value in the methodology	n/a
EF _{b,fuel,non-CO2}	Non-CO ₂ emission factor of the fuel that is reduced	Included as two separate parameters one for CH ₄ and one for N ₂ O	Approximately – the parameter is split into two separate ones	Yes	Yes	Please see CL 4 – ERM CVS was not able to validate the values by checking against the source data. The CL 4 was closed after further information was provided and ERM CVS was able to validate that the emission factors are correct in line with IPCC Guidelines for GHG inventories /10/, and the updated of GWP for	n/a

Parameter required as per meth / tools	Description of parameter (as per meth/ tools)	Include d in revised PDD?	Title & description in revised PDD in line with meth/ tools?	Data unit correctly expressed in revised PDD?	Value needs to be re-assessed ?	Value in revised PDD correct & provides for conservative estimate of Emission Reductions? How was this validated?	Measurement method correctly described in revised PDD (if applicable)
						methane for the second commitment period has been used /10, 12/.	

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
7.3	<p>Have the parameters required by the methodology / tools been correctly described in the PDD?</p> <p>Have the values been reassessed, where appropriate, and are the reassessed values valid and applicable?</p>	<p>As described in the section above, the NCV value was not updated in the initial version of the VPA-DD and was not in line with the methodology, and it was not clear how the PP derived emission factors for non-CO2 emissions – please see CAR 1 and CL 4. Please also refer to CAR 2 raised at the PoA level about fuelwood use per household being a separate parameter fixed ex-ante.</p> <p>The CAR 1 and CL 4 were closed after the PP provided further information and justification, which was checked and confirmed by ERM CVS – please see table above and Appendix B for further details.</p> <p>The CAR 2 at the PoA level was closed and the PoA-DD and VPA-DD both now have a single fuelwood savings parameter, which is a monitoring parameter. This is in line with the methodology.</p> <p>After the closure of the above issues ERM CVS can confirm that all the values were re-assessed and were appropriate updated.</p>	<p>CAR 1</p> <p>CL 4</p>	OK

6.4 Equations and calculations used to calculate emission reductions

ERM CVS validated that the updated parameters were correctly applied to recalculate the project emissions, baseline emissions, leakage and emission reductions for the project activity, and that the calculation steps required by the new version of the methodology and any applied tools have been followed correctly, and as described in the generic VPA of the PoA. The following steps are applied in the VPA-DD to determine emission reductions, in accordance with the methodology applied and the generic VPA:

The VPA covers replacement of traditional wood fuel-burning fogon stoves with efficient wood fuel-burning Dos por tres stoves, i.e. the project and baseline fuel stays the same. Therefore in line with the methodology and the PoA-DD, when the baseline fuel and the project fuel is the same (woody biomass) the baseline emission factor and the project emission factor are considered the same, the emission reductions are calculated as follows:

$$ER_y = \sum_{b,p} (N_{p,y} * U_{p,y} * P_{p,b,y} * NCV_{b,fuel} * (f_{NRB,b,y} * EF_{fuel,CO2} + EF_{fuel,nonCO2})) - \sum LE_{p,y}$$

Where:

- $\sum_{b,p}$ = Sum over all relevant (baseline b/project p) couples
- $N_{p,y}$ = Cumulative number of project technology-days included in the project database for project scenario p against baseline scenario b in year y
- $U_{p,y}$ = Cumulative usage rate for technologies in project scenario p in year y, based on cumulative adoption rate and drop off rate revealed by usage surveys (fraction)

- $P_{p,b,y}$ = Specific fuel savings for an individual technology of project p against an individual technology of baseline b in year y, in tons/day, as derived from the statistical analysis of the data collected from the field tests
 $f_{NRB,b,y}$ = Fraction of biomass used in year y for baseline scenario b that can be established as non-renewable biomass
 $NCV_{b,fuel}$ = Net calorific value of the fuel that is substituted or reduced (IPCC default for wood fuel, 0.015 TJ/ton)
 $EF_{b,fuel,co2}$ = CO2 emission factor of the fuel that is substituted or reduced. 112 tCO₂/TJ for wood/wood waste, or the IPCC default value of other relevant fuel
 $EF_{b,fuel,non-co2}$ = Non-CO2 emission factor of the fuel that is reduced.
 $LE_{p,y}$ = Leakage for project scenario p in year y (tCO₂e/yr)

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
6.4.1	<p>Has the PP correctly applied all relevant calculations as required by the methodology and associated tools?</p> <p>Does the PDD transparently explain how the procedures provided in the Methodology and applicable Tools are applied by the proposed project activity? (<i>i.e. are the required steps clearly followed?</i>)</p>	<p>The equations to be used for calculation of emission reductions and the parameter descriptions are in line with the methodology, except for the issues raised in the sections above. As per the new version of the methodology, fuel use per household in the baseline and project scenarios is not analysed separately but is to be analysed together – please refer to CAR 2 raised in the PoA validation report. Please also refer to CL 3 raised at the PoA level, especially on leakage sources that are to be investigated.</p> <p>CAR 2 and CL 3 at the PoA level were closed, and the VPA-DD is now consistent with the revised PoA-DD. The description now clearly describes the choices from the methodology. Project studies as well as leakage sources are described in the monitoring plan section and are validated below. The PP will use the 90/30 rule for the statistical analysis and when the rule is not met the 90% confidence rule will be used instead. The NRB fraction is now correctly included as a monitoring parameter, and instead of two separate fuel use parameters for baseline and project scenarios, there is now just one fuelwood use savings parameter, which is monitored. This is in line with the applied methodology.</p>	TBC after PoA CAR 2 and CL 3 closure	OK
	Where the methodology provides for selection between different options for equations; is every choice of options for calculating project emissions, baseline emissions and leakage offered by the methodology correctly justified in the context of the project activity and baseline scenario?	Yes, the VPA-DD correctly explains that equation 1 from the methodology is applicable because the baseline fuel and the project fuel are the same and baseline and project emission factors can be considered to be the same.	OK	OK
	Are the formulae required for the determination of project emissions, baseline emissions and leakage correctly presented in a complete and transparent manner, enabling a complete identification of parameters to be used and / or monitored?	<p>There are some inconsistencies between the description of methodological choices and the parameter tables – to be determined after other CARs and CLs at the PoA and CPA level are closed.</p> <p>ERM CVS reviewed the revised VPA-DD and PoA-DD and can confirm that the updated VPA-DD is now consistent between the description of methodological choices and the parameter tables, and both sections in the VPA-DD are consistent with the PoA-DD.</p>	TBC	OK
	Are detailed calculations provided in a traceable spreadsheet showing relevant information?	<p>The detailed calculations are provided but validation pending the solving of issues around parameter values at the PoA and VPA level.</p> <p>The revised calculations were reviewed and confirmed to be traceable and</p>	TBC	OK

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
	Is the table of emission reductions in the PDD consistent with the calculations?	showing the relevant information.		
	Can the calculation of emission reductions be replicated using the data and parameters supplied in the PDD?	The calculation of emission reductions can be replicated using the data and parameters supplied in the VPA-DD.	TBC	OK

Conclusion

ERM CVS confirms that, based on the information reviewed and calculations reproduced by the validation team:

- (a) All assumptions and data used by the PPs are listed in the VPA-DD, including their references and sources;
- (b) All documentation used by PPs as the basis for assumptions and the sources of data are correctly quoted and interpreted in the VPA-DD;
- (c) All values used in the VPA-DD are considered reasonable in the context of the proposed project activity;
- (d) The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;
- (e) The 'Tool to assess the validity of the original/current baseline and to update the baseline at the renewal of a crediting period' has been correctly applied to update the values, where relevant.
- (f) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the VPA-DD.

7 Validation Findings— Monitoring Plan

To support a request for renewal of the crediting period of a registered project activity, project participants are required to update the sections of the PDD (VPA-DD) relating to the monitoring plan. Therefore ERM CVS evaluated the monitoring plan for the proposed project to ensure that it is based on the approved monitoring methodology that has been applied.

7.1 Compliance of the monitoring plan with the approved methodology

ERM CVS evaluated the updated VPA-DD to ensure that the monitoring plan in the VPA-DD includes all parameters necessary for monitoring of this type of project in accordance with the approved methodology that has been applied for this project. The parameters are clearly described and the means of monitoring described in the plan complies with the requirements of the methodology.

Completeness of monitoring parameters

The monitoring parameter(s) required by the methodology and applicable tools and the PoA-DD for this type of VPA are:

Parameter Name	Parameter Description	Is the parameter appropriately included in the Monitoring Plan? (including justification and substantiation of information, data and evidence and explanation if any are excluded from the monitoring plan)
$f_{NRB,b,y}$	Fraction of biomass used in year y for baseline scenario b that can be established as non-renewable biomass	The parameter is included as per the applied methodology and in line with the revised PoA-DD.
$P_{b,p,y}$	Specific fuel savings for an individual technology of project p against an individual technology of baseline b in year y, in tons/day, as derived from the statistical analysis of the data collected from the field tests	The parameter is included as per the applied methodology and in line with the revised PoA-DD.
$U_{p,y}$	Cumulative usage rate for technologies in project scenario p in year y, based on cumulative adoption rate and drop off rate revealed by usage surveys (fraction)	The parameter is included as per the applied methodology and in line with the revised PoA-DD. Although the description is altered in the parameter table the meaning is essentially the same
$N_{p,y}$	Cumulative number of project technology-days included in the project database for project scenario p against baseline scenario b in year y	The parameter is included as per the applied methodology and in line with the revised PoA-DD.
$LE_{p,y}$	Leakage for project scenario p in year y (tCO ₂ e/yr)	The parameter is included as per the applied methodology and in line with the revised PoA-DD.

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
8.1.1	Are all required parameters (according to the methodology and tools) included in the monitoring plan?	After the closure of issues identified at the PoA level ERM CVS can confirm that all parameters required by the applied methodology are included, in line with the revised PoA-DD.	TBC	OK

Conclusion

The monitored parameters included in the monitoring are complete and appropriate for monitoring of this project activity

Compliance of monitoring

For each parameter, ERM CVS has validated whether it has been addressed in accordance with the baseline and monitoring methodology.

Monitored Parameters	Parameter Names				
	f _{NRB,b,y}	P _{b,p,y}	U _{p,y}	N _{p,y}	LE _{p,y}
Parameter Title correct?	Yes	Yes	Yes	Yes	Yes
Description in line with methodology/tool?	Yes	Yes	Yes	Yes	Yes
Data unit correctly expressed?	Yes	Yes	Yes	Yes	Yes
Source clearly referenced?	Yes – third party studies as presented in GS1377 VPA3	Yes – KPTs	Yes – survey	Yes – installation database	Yes – survey
Correct value provided for ex ante estimation?	Yes, confirmed by reviewing the VPA-DD for Utsil Naj – Casa saludable para todos – VPA 3 /20/.	Yes, validated based on review of a spreadsheet with KPT results /05/. These values were used in the issuance /09/.	Yes, the drop-off rates monitored in the 1 st crediting period were used for ex-ante ER calculations /09, 03/	Yes, based on interviews with the CME. The values are based on reasonable rates of expansion projected at the present date, which is a reasonable approach normally used for cookstove projects	Yes, confirmed by reviewing the latest verification report /09/
How has this value been verified?	N/a	N/a	N/a	N/a	N/a
Measurement method correctly described?	N/a	Yes	Yes	N/a	N/a
Measurement and recording frequency correctly described?	Yes	Yes	Yes	Yes	Yes
Correct reference to standards?	N/a	N/a	N/a	N/a	N/a
Indication of accuracy provided?	N/a	N/a	N/a	N/a	N/a
QA/QC procedures described?	N/a	Yes	Yes	In the monitoring plan section	Yes, more details in the monitoring section
QA/QC procedures appropriate/in line with methodology/tool?	N/a	Yes	Yes	Yes	N/a

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
9.1.2	Are all required parameters appropriately monitored in accordance with the methodology/tools?	Following closure of CAR 2 and CL 4 at the PoA level ERM CVS can confirm that all required parameters are appropriately monitored in accordance with the applied methodology	TBC	OK

Conclusion

The means of monitoring all relevant monitored parameters complies with the requirements of the methodology and applicable tools.

7.2 Implementation of the monitoring plan

ERM CVS evaluated the feasibility and sufficiency of the monitoring plan. The key components of the monitoring plan are as follows.

The operational and management plan, sampling plan, and quality assurance and quality control measures are in line with those described and validated at the PoA level.

The monitoring plan is feasible based on ERM CVS sector knowledge

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
9.2.1	Are the arrangements described in the plan feasible and practical within the project design? Please consider: (a) operational and management structure, including responsibilities (b) Plans for maintenance and calibration of equipment (c) Plans for QA/QC of equipment and data (d) Installation of monitoring equipment (whether in place, or planned)	Validation was pending on closure of issues identified at the PoA level. Please refer to the PoA renewal validation report on how those issues were closed. Based on review of the revised VPA-DD against the revised PoA-DD, applied methodology, and previous verification report, as well as based on interviews with the CME, ERM CVS can confirm that the arrangements described in the plan are feasible and practical. The operational and management structure is clear and provides for a good oversight and control. No metering or measurement equipment is used other than scales and timer in kitchen performance tests, so calibration is not applicable. The quality assurance and control measures are appropriate for the monitoring of stove sales/installation and undertaking the surveys and kitchen performance tests, based on ERM CVS sector knowledge.	TBC	OK

Conclusion

Based on the validation activities performed, ERM CVS concludes that:

- (a) The monitoring plan is fully in compliance with the requirements of the methodology;
- (b) The monitoring arrangements described in the monitoring plan are feasible within the project design;

-
- (c) The means of implementation of the monitoring plan, including the data management and quality assurance and quality control procedures, are sufficient to ensure that the emission reductions achieved by/resulting from the proposed CDM project activity can be reported ex post and verified.

The assessment conducted by ERM CVS is by means of review of the documented procedures, interviews with relevant personnel and project plans. In ERM CVS's opinion, the PPs are able to implement the monitoring plan.

8 Validation Findings – Stakeholder consultation and Sustainability assessment

In line with the Gold Standard Annex Z, ERM CVS has:

- Evaluated the PP's decision whether to conduct a complementary stakeholder consultation for the renewal of the crediting period;
- Validated updated Sustainable Development Assessment whether a revision was needed in the scores of the sustainable development indicators or the level of risk associated with the safeguarding principles
- Evaluated the PP's decision whether there is a need to prepare a revised sustainable development monitoring plan to accommodate any changes and/or comments from the local stakeholders.

	Question	Validation findings (including justification and substantiation of information, data and evidence)	Draft OK/ CAR/CL	Final OK/ Not OK
9.1.1	Has the PP sufficiently substantiated the argumentation whether and why there is or is not a need to conduct complementary stakeholder consultation for the renewal of the crediting period?	The additional stakeholder consultation on the VPA activities in Honduras was conducted in January 2013 when the previously-standalone project activity was included as a VPA into the PoA, as confirmed based on the review of the PoA and VPA validation reports. Two years is a sufficiently short period of time to justify that conditions have not changed and a complimentary consultation at the point of crediting period renewal is not needed.	OK	OK
9.1.2	Has the Sustainable Development Assessment been updated with respect to the updated baseline?	The baseline scenario as such has not changed for the second crediting period as confirmed in the validation of the baseline above. The sustainability assessment, including do-no-harm assessment and sustainability matrix, were done and updated in 2013, as confirmed based on the review of the PoA and VPA validation reports. Two years is a sufficiently short period of time to justify that conditions have not changed and an updated assessment is not needed.	OK	OK
9.1.3	Has the PP sufficiently substantiated the argumentation whether and why there is or is not a need to prepare a revised sustainable development monitoring plan?	Due to above described reasons ERM CVS agrees that there is no need to prepare a revised sustainable development monitoring plan.	OK	OK

Appendix A: References

A.1 DOCUMENT LIST

Reference number	Date	Document Title and version number (if applicable)
01	01 October 2015 25 March 2016	VPA-DD Version 02 Version 06
02	01 August 2015	VPA Passport
03		ER calculations spreadsheet
04	21 July 2015	Letter from Rob Bailis, Yale School of Forestry and Environmental Studies, Re: Changes in NRB in Western Honduras
05		Spreadsheet with KPT results
06		GS v2.2 Annex Z. Gold Standard Procedures for the Renewal of the Crediting Period
07		Gold Standard methodology 'Technologies and Practices to Displace Decentralized Thermal Energy Consumption', version 02
08	13 November 2015	Questionnaire for the Leakage and Sustainability Survey
09	29 December 2014	Earthood. Gold Standard Verification report 'Proyecto Mirador Enhanced distribution of Improved Cookstoves in Latin America'. Monitoring Period: 01/12/2013 – 30/11/2014
10	2006	IPCC Guidelines for National Greenhouse Gas Inventories 2.1, Volume 2: Energy
11	March 2014	Water Boiling Test protocol on the Global Alliance for Clean Cookstoves' website (http://cleancookstoves.org/technology-and-fuels/testing/protocols.html accessed on 18 December 2015), file "WBT 4.2.4 Spreadsheet."
12	2007	Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, 2007 (https://www.ipcc.ch/publications_and_data/ar4/wg1/en/errataserrata-errata.html)
13		Stove Team International; http://www.stoveteam.org/
14	30 September 2015	PRESIDENTE HERNÁNDEZ EXPONE SOBRE VIDA MEJOR Y HONDURAS ACTÍVATE ANTE LA OMS Y OPS. – article on the website of the Honduran government Accessed in December 2015
15	01 November 2011	Climate Investment Funds. Meeting of the SREP Sub-Committee. Investment Plan for Honduras http://www.climateinvestmentfunds.org/cif/sites/climateinvestmentfunds.org/files/SREP%206%20Honduras%20IP.pdf
16		Honduras Sustainable Rural Energisation: https://climateinvestmentfunds.org/cifnet/project/honduras-sustainable-rural-energization-erus

Reference number	Date	Document Title and version number (if applicable)
		Accessed in December 2015
17		World Bank data: http://databank.worldbank.org/data/reports.aspx?source=2&country=HND&series=&period=
18		UNICEF data: http://www.unicef.org/infobycountry/honduras_statistics.html
19		Spreadsheet with sustainability and monitoring survey results
20	22 May 2015	VPA-DD for Utsil Naj – Casa saludable para todos – VPA 3

A.3 INTERVIEWS

Reference	Name	Title & Organisation	Main topics discussed
IV1	Esther Adams	Proyecto Mirador	VPA implementation, baseline, application of the methodology, monitoring plan, ER calculations
IV2	Rob Bailis	Stockholm Environmental Institute (formerly of the Yale School of Forestry and Environmental Sciences)	Kitchen performance tests, statistical analysis, sampling

Appendix B: Remediation Form

Corrective Action Requests (CARs), Clarification Requests (CLs) and Forward Action Requests (FARs)

Corrective Action Requests	Ref. to Question Number	Summary of PPs' response	Final conclusion (explain why issue is closed and how this was validated)
<p>CAR 1. The value for the NCV of the baseline fuel in the original VPA-DD was taken as an NCV for red oak from a publication from 1980, and the value was not updated and no justification provided. Further, the methodology specifies the default value that should be used, and the value used for the VPA is not in line with the one specified in the methodology. Please correct</p>	<p>6.2.4</p>	<p>The following explanation is provided according to information from Rob Bailis, PhD, who is available to confirm as necessary:</p> <p>The IPCC default of 0.015 TJ/ton (15 MJ/kg) is an estimation for generic hardwood on an air-dry basis (usually 10-15% moisture). Mirador's value of 18.6 MJ/kg is on a dry basis and Mirador's ER calculations are based on reductions of dry wood consumption (all the figures we derive from the KPTs are on a dry basis). In fact, the two values are nearly equal. Red oak with a HHV of 18.6 MJ/kg at 0% moisture would have an NCV of 15 MJ/kg at 12% moisture. However, the wood we measure in the KPTs varies, with averages between 18 and 25%. This has an effective NCV lower than 15 MJ/kg, which is implicit in Mirador's ER calculations. In contrast, the standard ER calculation used in the TPDDTEC does not account for wood moisture and is done on an "air dry" basis. If Mirador used the default value, we would lose accuracy and probably calculate a slightly higher ER.</p> <p>Despite the fact it was published in 1980, Cheremisnoff's spreadsheet is in common use within the stove testing community for determining calorific values to the greatest accuracy possible. For example, the current Water Boiling Test protocol posted on the Global Alliance for Clean Cookstoves' website (http://cleancookstoves.org/technology-and-fuels/testing/protocols.html) includes the downloadable file "WBT 4.2.4 Spreadsheet." This template represents the industry standard per IWA protocols, and includes a sheet labeled "Calorific values" that references Cheremisnoff, N. (1980). Properties of Wood. Wood for Energy Production. Ann Arbor, MI, Ann Arbor Science: 31-43."</p> <p>Since the GACC spreadsheet is more commonly known than the primary source, we have modified the reference in the Parameter to reflect the GACC resource primarily, with secondary reference to Cheremisnoff.</p>	<p>The explanation provided is clear and reasonable considering that the VPA-DD specifies that KPT results are adjusted for moisture content. ERM CVS checked the latest version (4.2.4) of the spreadsheet for Water Boiling Test protocol available on the website for the Global Alliance for Cookstoves /09/ and can confirm that the value in the VPA-DD and PoA-DD is in line with the reference source. The Protocol is widely used by cookstove projects globally and the reference is credible.</p> <p>CAR 1 is closed</p>

Clarification Requests	Ref. to Question Number	Summary of PPs' response	Final conclusion (explain why issue is closed and how this was validated)
<p>CL 1. Section D.2 of the VPA-DD does not demonstrate how applicability conditions of the methodology were met in line with the PoA-DD. Please also clarify whether other voluntary market or CDM project or programme activities involving efficient stoves are implemented in Honduras and whether a survey mechanism is in place to prevent any possibility of double counting</p>	<p>4.7.1</p>	<p>A restatement of the applicability conditions #1-5 have been added to Section D.2 and justified specifically.</p> <p>The following language has been added to Section D.6.1, Step 1.2, <i>Assess the Impact of Circumstances</i>, with respect to double counting:</p> <p style="padding-left: 40px;">Stoves are built <i>in situ</i> and a unique household account is created in the electronic database at the time of construction, including a GPS mark. Furthermore, an inspector goes to each house before construction can begin and at that time, verifies that ICS technology is not already present. For those reasons, if there is another similar activity within the same target area, stoves from the other project cannot possibly be counted under Mirador's activity.</p> <p>The same explanation was also inserted under the VPA-DD Eligibility Criteria (#2 – Avoid double counting) as justification for VPA inclusion.</p>	<p>Section D.2 of the amended VPA-DD now includes a description how the VPA meets methodology's applicability conditions, with justifications provided. Explanation on why there is no possibility of double counting associated with other CDM or VER projects implemented in Honduras is found reasonable.</p> <p>CL 1 is closed.</p>
<p>CL 2. Please describe in the VPA-DD an assessment of the changes in market characteristics on the baseline. Please provide information on the current total penetration of new stoves from various projects, and further substantiation how the baseline is projected not to change over the 7-year crediting period, i.e. that households would be unlikely to buy an efficient stove in the absence of this project activity</p>	<p>6.2.2</p>	<p>A detailed analysis was added in the section D.6.1, <i>Explanation of Methodological Choices</i>, under <i>Step 1.2, Assess the impact of circumstances</i>.</p>	<p>A comprehensive description was added to the analysis on the changes in market characteristics, which describes other projects and initiatives that distribute/install/sell improved cookstoves. Please see section 6.2 above for the validation of provided information.</p> <p>CL 2 is closed.</p>

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Clarification Requests	Ref. to Question Number	Summary of PPs' response	Final conclusion (explain why issue is closed and how this was validated)
CL 3. The step 1.3 of the assessment was not done in line with the latest version of the Tool – please modify	6.2.3	The list in Section D.1 has been updated to reflect the most recent version of the Tool: CDM EB 66, Annex 47, "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period" (Version 03.0.1). Step 1.3 has been updated according to the latest version.	Based on review of the amended VPA-DD against the Tool "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period", the step 1.3 is now completed in line with the Tool. Please see section 6.2 above for further details. CL 3 is closed.
CL 4. ERM CVS was not able to validate the emission factor values for CH ₄ and N ₂ O by checking against the sources. Please clarify how the emission factors of CH ₄ and N ₂ O as expressed in tCO ₂ e/TJ were obtained, by showing separately the values of EF in t of the relevant GHG per TJ and the values of GWP for each gas	6.2.4	<p>As noted in the ER Calculations spreadsheet, default values for all emission factors including CH₄ and N₂O are sourced from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories 2.1, Volume 2: Energy (http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf). References have been added to the VPA Parameters accordingly.</p> <p>Default values for the GWP for each gas are sourced from the "Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, 2007" (https://www.ipcc.ch/publications_and_data/ar4/wg1/en/errataserrata-errata.html). Please refer to the ER Calculations for the aggregate value 8.692 for EF_{fuel,nonCO2} (see "Assumption" sheet, Cell E9). The value is calculated as follows:</p> $(EF_{fuel,CH_4} * GWP_{CH_4}) + (EF_{fuel,N_2O} * GWP_{N_2O})$ $= (0.30 \text{ tCO}_2\text{e/TJ} * 25 \text{ tCO}_2\text{e/tCH}_4) + (0.004 \text{ tCO}_2\text{e/TJ} * 298 \text{ tCO}_2\text{e/tN}_2\text{O})$ $= \mathbf{8.692 \text{ tCO}_2\text{/TJ}}$	ERM CVS was now able to track the values of non-CO ₂ emission factors to the sources. Emission factors are correct, and the updated of GWP for methane for the second commitment period has been used – validation against references is provided in section 6.3 above. CL 4 is closed.
CL 5. It is not clear from the VPA-DD if the PP has conducted an updated survey on a sample of end users without project	6.2.4	A 2012 Design Change enabled the project's expansion into areas of Honduras other than the 4 Departments approved in the original PDD, wherever baseline conditions are otherwise similar. In order to show that	The latest sets of kitchen surveys on baseline households were conducted in 2013-2014 as confirmed by reviewing the

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Clarification Requests	Ref. to Question Number	Summary of PPs' response	Final conclusion (explain why issue is closed and how this was validated)
<p>technology that are representative of end users targeted for the project (e.g. from a pre-sales list for further installation of project stoves). Please clarify</p>		<p>beneficiary households within the expanded boundary meet the newly defined cluster, The Gold Standard issued a Forward Action Request as follows:</p> <p><i>PP shall proceed with qualitative Kitchen Surveys for each new province as expansion occurs, and will submit the KS results to the DOE for each province on time for the first Verification for which the province is included in the project boundary.</i></p> <p>Accordingly, from 2013 to 2014, PM conducted a total of 175 Kitchen Surveys in 7 Departments spread throughout Honduras. Results consistently indicate baseline conditions similar to those encountered since project inception. Those surveys were accepted by the Gold Standard with the 3rd, 4th, and 5th Verifications as justification that baseline conditions were similar throughout the project area.</p> <p>Additionally, in 2015, Mirador completed a more detailed, n=69 survey of baseline households prior to construction of the Dos por Tres in the region of Cortés and confirmed a high degree of continuity. Nothing was found that would indicate that the consumption habits of target households, being households using a traditional fogón, have changed since project inception, or to indicate a need to reassess the baseline.</p>	<p>spreadsheet with survey results and the recent verification report /19, 9/ and in 2015 in areas which the project was expanding to /19/. The results showed that baseline conditions in those areas are in line with those surveyed at the start of project implementation /19, 9/. As these surveys were done recently it is reasonable that new set of baseline surveys was not conducted.</p> <p>CL 5 is closed.</p>
<p>CL 6. Please clarify the following aspects:</p> <ul style="list-style-type: none"> Justification why the baseline fuel consumption was not re-assessed now at the time of the renewal of the crediting period It is not clear which set of tests – from 2010 or 2013 – is used as the source for fuelwood consumption. 	<p>6.2.4</p>	<p>A baseline KPT was performed informally in 2013 in order to confirm the accuracy of the 2010 survey. This was done after we ascertained that another stove organization was reporting a much higher baseline fuelwood consumption figure for Honduras (nearly double ours) and wondered if perhaps we were reporting an inaccurately low figure. The 2013 study was never intended to replace the figures from 2010 baseline study already verified by the Gold Standard, but rather to give us a sense as to whether or not there was a discrepancy that warranted further exploration.</p> <p>As explained in the summary document by Dr. Rob Bailis (which was provided to the DOE with initial submission for Revalidation under the file name "03_Bailis 2010-2013_Baseline_KPT_Brief.pdf"), the 2013 study</p>	<p>The description is now clear that the results of baseline KPT tests from 2010 /5/ are used in calculations of ERs, whilst the additional surveys and tests were aimed at confirming that the data from 2010 can continue to be used. Considering that the last time the justification for the continued validity of the original baseline KPT results was done is 2015, i.e. this year, ERM CVS accepts that the data from 2010 KPT tests for the baseline fuelwood use can be used.</p>

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Clarification Requests	Ref. to Question Number	Summary of PPs' response	Final conclusion (explain why issue is closed and how this was validated)
<ul style="list-style-type: none"> What sampling method and sampling frame were used to select the sample for the KPT, and justification that it ensured the sample is representative of the total population. Which option for the statistical analysis was used as defined in the methodology applied for the second crediting period? Please provide results of the statistical testing 		<p>confirmed that the differences between the two baseline studies “are insignificant and we can conclude that there has been no variation in baseline fuel consumption in this time period.”</p> <p>In addition, the 175 baseline Kitchen Surveys conducted with respect to the 2012 FAR and the 69 baseline Kitchen Surveys conducted in 2015 (all described in CL5 above) confirm that there is no significant variation in baseline characteristics across the project area, nor has there been any significant change in baseline conditions since project inception (as defined per the Yale 2007 study cited in the original PDD).</p> <p>For the above reasons, Mirador will continue deriving the baseline fuelwood consumption figure from the 2010 Fuelwood Consumption Study already approved by the Gold Standard, rather than perform a reassessment of the baseline for Revalidation.</p> <p>The 2010 Fuelwood Consumption Study confirmed mean adult equivalent per person-meal fuelwood usage of 1.26 kg at a 90% confidence level. (See file “09_PM Fuel Usage Study Summary Report 101510.doc,” Page 3.) That is the figure used in the ER calculations for Revalidation.</p> <p>The sampling frame for the 2010 study is the entire population of <i>fogon</i> users that rely on biomass fuel in Honduras. The sample group was chosen by selecting four separate villages without ICS technology that typify the cooking conditions that prevail in absence of Mirador’s activity. In each village, KPT participants were selected at random, subject to individual availability and cooperation.</p> <p>Per TPDDTEC V.2.0 methodology, “When the baseline fuel and project fuel are the same, the statistical analysis can be conducted with respect to fuel savings per unit.” Accordingly, the file “10_Bailis Oct 2015 New Aging and Project 9030 tests.xlsx” is provided and contains the statistical analysis, performed by Dr. Bailis, to determine whether fuelwood reduction calculations for project vs. baseline in each age group meet the 90/30 rule.</p>	<p>The excel spreadsheet was reviewed with the baseline and project KPT data /5/, and with the analysis of which combinations of baseline and project results satisfy or do not satisfy the 90/30 rule. Currently not all age groups satisfy the rule if data per capita is analysed but the household level savings data satisfy the rule, and in most cases the data per person-meal also satisfy the rule. The explanation is found reasonable that this is affected by higher variability in household size, and the further addition of project KPT tests will likely increase the accuracy. Therefore it is likely that in the next issuance the results per person meal will satisfy the 90/30 rule for all age groups.</p> <p>CL 6 is closed.</p>

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Clarification Requests	Ref. to Question Number	Summary of PPs' response	Final conclusion (explain why issue is closed and how this was validated)
		<p>Dr. Bailis' observations on the statistical analysis are as follows:</p> <ol style="list-style-type: none"> 1. All average daily use comparisons satisfy the 90/30 rule. 2. Since there is more variation in per-capita data than at household-level data, not all of the average daily per capita fuelwood use comparisons satisfy the 90/30 rule. 3. All per-person-meal comparisons satisfy the 90/30 rule except in the 2015 study (average stove age 5.5 years). <p>In order to strengthen the statistical confidence of each fuelwood reduction comparison, Mirador will continue to add project scenario KPTs to each age group until the 90/30 rule is satisfied (and in any event, until a sample size of 100 is reached in each group) and will continue to perform KPTs thereafter in order to further diversify the geographic base of each group of surveys.</p>	