POA VALIDATION REPORT

"UP ENERGY IMPROVED COOKSTOVE PROGRAMME IN UGANDA

REPORT NO. 2011-9682

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POA VALIDATION REPORT

Date of first issue: 15 March 2012	ConCert Project No.: PRJC-328273-2011-CCS-USA
Approved by: Michael Lehmann	Organisational unit: Accredited Climate Change Services
Client: Impact Carbon	Client ref.: Jimmy Tran

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Summary:

Title of PoA: Up Energy Improved Cookstove Programme

Country: Uganda

Methodology: AMS-II.G **Version:** 05

GHG reducing Measure/Technology: End use non-institutional and institutional cook stove energy efficiency improvement

Sectoral scope(s): 3.2 – Household end use energy efficiency

ER estimate of 1st CPA: 44 874 tCO_2e per year (average)

Size ☐ Large Scale ☒ Small Scale

Validation Phases:

☒ Desk Review ☒ Follow up interviews

☒ Resolution of outstanding issues

Validation Status

☐ Corrective Actions Requested ☐ Clarifications Requested

☒ Submission for registration ☐ Rejected

In summary, it is DNV's opinion that the programme of activity "Up Energy Improved Cookstove Programme" in Uganda, as described in the PoA-DD, version 4 of 30 June 2014, meets all relevant UNFCCC requirements for the CDM and correctly applies the baseline and monitoring methodology AMS-II.G, version 05. Hence DNV requests the registration of the PoA as a CDM programme of activity.

Report No.: 2011-9682	Subject Group: Environment
Report title: "Up Energy Improved Cookstove Programme" in Uganda	
Work carried out by: Shruthi Bachamanda, Nitin Kapoor, Misheck Kapambwe	
Work verified by: Weidong Yang	

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Abbreviations

CCT	Controlled cooking test
CDM-CPA-DD	CDM component project activity design document
CDM-POA-DD	CDM programme of activities design document
CER	Certified Emission Reduction
CL	Clarification Request
CO_2e	Carbon dioxide equivalent
CPA	Component programme activity
CME	Coordination / Managing Entity
DNA	Designated National Authority
DNV	Det Norske Veritas
DO	Distribution Organisations
DOE	Designated Operational Entity
EB	CDM Executive Board
EIA	Environmental Impact Assessment
ER	Emission Reduction
FAO	Food and Agriculture Organization of the United Nations
GHG	Greenhouse gas(es)
HH	Household
ICS	Improved Cook Stoves
KP	Kyoto Protocol
KPT	Kitchen Performance Test
LoA	Letter of Approval
LSC	Local Stakeholder Consultation
LPG	liquefied petroleum gas
MP	Monitoring Plan
NGO	Non-governmental Organisation
NRB	Non-renewable Biomass
PDD	Project Design Document
PoA	Programme of Activities
PP	Project participant
SH	Stakeholder
UNFCCC	United Nations Framework Convention on Climate Change
VER	Voluntary Emission Reduction
WBT	Water Boiling Test

1 EXECUTIVE SUMMARY – VALIDATION OPINION

DNV Climate Change Services AS (DNV) has performed a validation of the programme of activity (PoA) "Up Energy Improved Cookstove Programme" in Uganda including generic information relevant to all component project activities (CPAs) to be included in this PoA. The validation was performed on the basis of UNFCCC criteria for the Clean Development Mechanism as well as criteria given to provide for consistent project operations, monitoring and reporting.

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

The host Party is Uganda. The host party Uganda fulfils the participation criteria and have approved the PoA and authorized the project participant Up Energy Group. The DNA from Uganda confirmed that the PoA assists in achieving sustainable development.

The PoA correctly applies the baseline and monitoring methodology AMS-II.G, version 05 "Energy efficiency measures in thermal applications of non-renewable biomass".

By replacing traditional inefficient cookstoves with improved cook stoves, the programme aims to reduce CO_2 emissions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the project is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. As a result, the PoA results in reductions of CO_2 emissions that is real, measurable and gives long-term benefits to the mitigation of climate change. It is demonstrated that the PoA and typical component project activities (CPAs) are not a likely baseline scenario. Emission reductions attributable to the PoA are hence additional to any that would occur in the absence of the PoA.

The monitoring plan provides for the monitoring of the PoA's emission reductions. The monitoring arrangements described in the monitoring plan are feasible within the PoA design and it is DNV's opinion that the project participants are able to implement the monitoring plan.

In summary, it is DNV's opinion that the PoA "Up Energy Improved Cookstove Programme" in Uganda, as described in the PoA-DD, version 4 dated 30 June 2014 meets all relevant UNFCCC requirements for the CDM and correctly applies the baseline and monitoring methodology AMS-II.G, version 05. Hence, DNV requests the registration of the PoA as a CDM PoA.

Oakland and Oslo, 7 July 2014

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2 INTRODUCTION

Impact Carbon has commissioned DNV Climate Change Services AS (DNV) to perform a validation of the proposed small-scale CDM Programme of Activities (PoA) "Up Energy Improved Cookstove Programme" in Uganda (hereafter called "PoA"). The PP UpEnergy Group has agreement with Impact Carbon to contract with the validation body/39/. This report summarises the findings of the validation of the PoA including generic information relevant to all component project activities (CPAs) to be included in this PoA, performed on the basis of UNFCCC criteria for CDM PoAs, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM modalities and procedures, the simplified modalities and procedures for small-scale CDM project activities and the subsequent decisions by the CDM Executive Board.

2.1 Objective

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

2.2 Scope

The validation scope is defined as an independent and objective review of the PoA-DD including the description of the generic component project activity (CPA) with generic information relevant to all CPAs to be included in this PoA. The PoA-DD was reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed in the Marrakech Accords, the simplified modalities and procedures for small-scale CDM project activities, Standard for the demonstration of additionality, development of eligibility criteria, and application of multiple methodologies for programme of activities /20/ and the relevant decisions by the CDM Executive Board, including the approved baseline and monitoring methodology AMS-II.G (version 05).

The validation of the programme has also considered the completed CPA-DD for the CPA with the title "Up Energy Improved Cookstoves Programme, Uganda – CPA No 001" submitted together with the PoA-DD.

The validation was carried out in accordance with the principles and the requirements for validation contained in the Validation and Verification Standard /15/.

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

3 METHODOLOGY

The validation consisted of the following three phases:

I document review

II follow-up actions (e.g. on-site visit and telephone or email interviews)

III the closing out of validation findings and the issuance of the final validation report and opinion

The following sections outline each step in more detail.

3.1 Document review

The following tables list the documentation that was reviewed during the validation.

3.1.1 Documentation provided by the project participants

/1/ Up Energy Group/Impact Carbon: *CDM-SSC-PoA-DD for PoA titled "Up* Energy Improved Cookstove Programme" in Uganda*"*, version 4 dated 30 June 2014 and earlier versions

/2/ Up Energy Group/Impact Carbon: *CDM-SSC-CPA-DD for PoA titled* Up Energy Improved Cookstove Programme– *CPA No 001*, version 03 dated 26 November 2013 and earlier versions

/3/ Up Energy Group/Impact Carbon: *CDM-SSC-PoA-DD for PoA titled "Up* Energy Improved Cookstove Programme" in Uganda*"*, version 01 dated 29 July 2011

/4/ Up Energy Group/Impact Carbon: *Generic CDM-SSC-CPA-DD for PoA "Wood Improved Cookstoves Carbon Project Activity 1"*, version 01 dated 29 July 2011

/5/ Up Energy Group/Impact Carbon: *CDM-SSC-CPA-DD for CPA titled "Wood Improved Cookstoves Carbon Project Activity 1"*, version 01 dated 29 July 2011

/6/ Up Energy Group/Impact Carbon: "3. *PoA-DD Appendix 3.1-Baseline Analysis – Non-Instituional-v1", Excel spread sheet*, version 4 dated 30 June 2014

/7/ Up Energy Group/Impact Carbon: *"4. PoA-DD Appendix 3.2-NRB & Baseline Analysis-v1"*, version 4 dated 30 June 2014

/8/ Up Energy Group/Impact Carbon: *"5. PoA-DD Appendix 3.3-CIRCODU_Baseline Study Non-Institut-Uganda-2011"*, 4 dated 30 June 2014

/9/ Up Energy Group/Impact Carbon: "6. PoA-*DD Appendix 4.1-Ex-Ante ER Calcs-PoA", Excel spread sheet"*, version 4 dated 30 June 2014

/10/ Up Energy Group/Impact Carbon: *"9. CPA-DD Appendix 4.2-Ex-Ante ER calcs-1st CPA", Excel spread sheet*, version 4 dated 30 June 2014

/11/ Up Energy Group/Impact Carbon: *"10.CME Manual_Uganda_CDM",* , version 02 dated 9 July 2013

/12/ Up Energy Group/Impact Carbon: *Sampling Size Calculation Tool templates*, version 4 dated 30 June 2014

/13/ Up Energy Group/Impact Carbon: *Modalities of Communication*, 20 November 2012

3.1.2 Letters of approval

/14/ DNA of Uganda: 7. PoA DD Appendix 6- *Letter of Approval*; 13 May 2013

3.1.3 Methodologies, tools and other guidance by the CDM Executive Board

/15/ CDM Executive Board: *Clean Development Mechanism Validation and Verification Standard*, version 7.0

/16/ CDM Executive Board: Clean Development Mechanism Project Standard, version 7.0

/17/ CDM Executive Board: *Baseline and monitoring methodology* AMS-II.G "Energy efficiency measures in thermal editions of non-renewable biomass", version 5

/18/ CDM Executive Board: *General Guidelines to SSC CDM methodologies*, version 19

/19/ CDM Executive Board: *Guidelines on assessment of de-bundling for SSC project activities*, version 3

/20/ CDM Executive Board: *Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities*, version 3.0

/21/ CDM Executive Board: "*Guidelines on the demonstration of additionality of small-scale project activities*", version 9.0

/22/ CDM Executive Board: "*Guidelines For Sampling And Surveys For CDM Project Activities And Programme Of Activities*", version 4.1

/23/ CDM Executive Board: Default values of fraction of non-renewable biomass, http://cdm.unfccc.int/DNA/fNRB/index.html, date of acceptance by DNA of Uganda,11 April 2012

3.2 Documents used by DNV to validate / cross-check the information provided by the project participants

/24/ Impact carbon and Center for Integrated Research and Community Development (CIRCODU): Agreement to provide service including sampling plan and household surveys, 1 June 2011

/25/ Up Energy Group, Inc and Envirofit International, Ltd: Agreement on the sales of Envirofit stoves and allocation of carbon revenue, 28 July 2011

/26/ Up Energy Group, Inc and Impact Carbon: Agreement on ownership rights of emission reductions, 2 September 2011

/27/ Up Energy Group, Inc and The Paradigm project, 3LC: Agreement on waiver of rights to carbon credits generated by Up Energy in Uganda, 7 September 2011

/28/ Up Energy Group, Inc and Premier Green (U) Ltd: Agreement to source, warehouse, distribute and maintain carbon record keeping of clean energy stoves in Uganda. 27 July 2011

/29/ Up Energy Group, Inc and Up Energy Group: Transfer of shares, July 2013

/30/ Up Energy (Uganda) Ltd and Joseph Sceiclten: Contract for Sale of Up Energy (Uganda) ltd products, 19 October 2012

/31/ National Environmental Management Authority (NEMA): EIA exemption for Up Energy High Efficiency cook stove carbon project, 20 September 2011

/32/ CIRCODU : Baseline biomass consumption in Uganda, Kitchen Survey 2011, September 2011

/33/ National Environmental Management Authority (NEMA): Environmental Regulations and Policies, accessed on 17 October 2013 http://nema-ug.org/environment_regulations.php

/34/ Ministry of Energy and Mineral Development: Energy Policies and Legislation, accessed on 17 October 2013 http://energyandminerals.go.ug/policy

/35/ UpEnergy Group: Email from Erik Wurster with MOC, 18 October 2013

/36/ UpEnergy Website: Information on Management Team, http://upenergygroup.com/about-us/the-upenergy-team/, checked on 20 November 2013

/37/ Government of Uganda : The Renewable Energy Policy for Uganda, 29 March 2007

/38/ Approvecho Research Center: Results of Testing the Paradigm project stove (Ezy stove), October 2012

/39/ UpEnergy Group: Letter from UpEnergy to Impact carbon, approving them to contract DOE, 14 March 2014

/40/ Forestry Department, Ministry of Water, Lands & Environment: FOSA, Forestry OutLook Studies In Africa, Uganda, 2001 http://www.fao.org/DOCREP/004/AC427E/AC427E07.htm

/41/ MongaBay (environmental science and conservation news sites), History of Uganda Forests http://rainforests.mongabay.com/20uganda.htm, checked on 3 Sept 2013

3.3 Follow-up actions

The site visit was conducted on 1 August 2011 to 5 August 2011. As part of the site visit DNV visited households in urban and rural areas of Uganda. DNV visited 25 households in Kampala (Urban) and 25 Households in rural (Mityana and Bujuko). DNV's sample size for the number of household visits is based on the square root of the sample size taken by the project participant /32//1/. The below listed persons have been interviewed and/or provided additional information to supplement the presented documentation.

	Date	Name	Organization	Topic
/42/	2011-08-01	Matt Evans Elizabeth Gomez	Impact Carbon	Project background and management
/43/	2011–08-01	Michael Ahimbisibwe Kruinte Godfy	Ministry of Energy and Mineral	Improved cook stove distribution programs conducted by the government of Uganda

Development	The main type of cook stoves and fuels used in Uganda Studies conducted by the government or research institutes on types of cook stoves, fuel and amount of fuel usage per household Policy on renewable energy The different policies across the various regions in Uganda Program - Sustainable energy use in Households and Industry - 2002

/44/	2011-08-03	Joseph Kirule	Giz (PREEP)	Improved cook stove distribution programs conducted by Giz and other NGO's The main type of cook stoves and fuels used in Uganda The type of improved cook stoves distributed Deutsche Gesellschaft fur internationale Zusammenarbiet (GIZ) Gmbh. . The usage procedures used by Giz to distribute improved cook stoves, train manufacturers and retailers, track sales and usage etc The barriers faced by Giz to distribute improved cook stove and train employees. The price of the improved cook stoves sold by Giz and other NGOs.
/45/	2011-08-04		Households	The type of stove used in the HH The number of stoves used in the HH Number of people in HH The amount of Fuel used per week The type of fuel used for cooking The source of fuel wood (collection or purchase) The amount of time and resource spent on collection of fuel wood The amount spent on purchase of fuel wood. The source of fuel wood
/46/	2011-08-04	Kasasa Godfrey	District Head Nsangi sub county in Wakiso District	The stakeholder consultation meeting conducted by PP The response from the community on the pilot programme The awareness of the community about the project

3.4 Closing out of validation findings

The objective of this phase of the validation was to resolve any issues which needed be clarified prior to DNV's conclusion on the PoA's compliance with applicable CDM

requirements. In order to ensure transparency a validation protocol was customised for the PoA. The protocol shows in a transparent manner the criteria (requirements), means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

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

The validation protocol consists of four tables. The different columns in these tables are described in the figure below. The completed validation protocol for the PoA "Up Energy Improved Cookstove Programme," in Uganda is enclosed in Appendix A to this report.

Table 2 of the validation protocol documents the findings of the desk review of the PoA design documentation and follow-up interviews with PoA stakeholders. Any findings raised in Table 2 are listed in Table 3 of the protocol, and changes to the description of the PoA design as a result of these findings are addressed in Table 3. Table 2 thus may not reflect all aspects of the PoA as described in the final PoA-DD submitted for registration.

A corrective action request (CAR) is raised if one of the following occurs:

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

(b) Applicable CDM requirements have not been met;

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

A clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

A forward action request (FAR) is raised during validation to highlight issues related to PoA implementation that require review during the first verification of CPAs of the PoA. FARs shall not relate to the CDM requirements for registration.

The validation identified [nineteen] CARs, [six] CLs and [four] FARs. The CARs and CLs were satisfactorily addressed by the project participants by among other revising the PoA-DD (please refer to Table 3 in Appendix A for further details). In addition to the changes made to the PoA-DD as a result of the validation findings, the following changes to the PoA-DD (version 4 of 30 June 2014) were made compared to the version of the PoA-DD published for stakeholder comments (version 01 dated 29 July 2011):

The main changes between the version of the CDM-SSC-PoA-DD published for the 30 days stakeholder commenting period and the final version submitted for registration are:

- The PoA DD and CPA DD were updated to the latest template version, i.e. F-CDM-SSC-PoA-DD - Programme design document form for small-scale CDM programmes of activities, version 2 and F-CDM-SSC-CPA-DD - Component project design document form for small-scale component project activities, version 2
- The PoA-DD and CPA-DD were updated to use the latest version of the Methodology AMS-II.G, version 5
- The PoA-DD and CPA-DD were updated to use the latest version of the Programme design document form for small-scale CDM programmes of activities (F-CDM-SSC-

POA-DD) version 02.0 and component project design document form for small-scale component project activities (F-CDM-SSC-CPA-DD) version 02.0
The eligibility criteria for the PoA-DD was revised compared to the PoA-DD, CPA-DD and CPA Generic that was published;

- The procedure for baseline study for future CPAs, sampling design plan for baseline and monitored parameters was revised;
- The additionality demonstration was revised. The initial PoA-DD used investment barrier to demonstrate additionality. This was revised to demonstrate additionality using "*Guidelines on the demonstration of additionality of small-scale project activities*" /21/as described in the PoA DD.
- The monitoring plan was revised. The PP included additional measures to ensure that there will be no double counting across CPAs and across other CDM projects implemented in Uganda.

Validation Protocol Table 1: Mandatory Requirements for CDM programme of activities (PoA)		
Requirement	***Reference***	***Conclusion***
The requirements the PoA must meet.	*Gives reference to the legislation or agreement where the requirement is found.*	*This is either acceptable based on evidence provided (**OK**) or a **corrective action request (CAR)** if a requirement is not met.*

Validation Protocol Table 2: Requirement Checklist				
Checklist question	***Reference***	***Means of verification (MoV)***	***Assessment by DNV***	***Draft and/or Final Conclusion***
The various requirements in Table 1 are linked to checklist questions the PoA should meet. The checklist is organised in different sections, following the logic of the PoA-DD	*Gives reference to documents where the answer to the checklist question or item is found.*	*Means of verification (MoV) are **document review (DR)**, **interview (I)** or any other follow-up actions (e.g., on site visit and telephone or email interviews) and **cross-checking (CC)** with available information relating to projects or technologies similar to the proposed CDM PoA under validation.*	*The discussion on how the conclusion is arrived at and the conclusion on the compliance with the checklist question so far.*	*OK is used if the information and evidence provided is adequate to demonstrate compliance with CDM requirements. A **corrective action request (CAR)** is raised when project participants have made mistakes, the CDM requirements have not been met or there is a risk that emission reductions cannot be monitored or calculated. A **clarification request (CL)** is raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met. A **forward action request (FAR)** during validation is raised to highlight issues related to PoA implementation that require review during the first verification of the PoA.*

Validation Protocol Table 3: Resolution of Corrective Action and Clarification Requests			
Corrective action and/ or clarification requests	***Ref. to checklist question in table 2***	***Response by project participants***	***Validation conclusion***
*The **CARs** and/ or **CLs** raised in Table 2 are repeated here.*	*Reference to the checklist question number in Table 2 where the CAR or CL is explained.*	*The responses given by the project participants to address the CARs and/or CLs.*	*The validation team's assessment and final conclusions of the CARs and/or CLs.*

Validation Protocol Table 4: Forward Action Requests		
Forward action request	***Ref. to checklist question in table 2***	***Response by project participants***
The FARs raised in Table 2 are repeated here.	*Reference to the checklist question number in Table 2 where the FAR is explained.*	*Response by project participants on how forward action request will be addressed prior to first verification.*

Figure 1: Validation protocol tables

3.5 Internal quality control

The validation report underwent a technical review performed by a technical reviewer qualified in accordance with DNV's qualification scheme for CDM validation and verification.

3.6 Validation team

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

				Type of involvement						
Role	***Last Name***	***First Name***	***Country***	Desk review	Site visit / Interviews	Reporting	Supervision of work	Technical review	TA 3.2 competence	TA 14.1 competence
Team Leader (Validator) from 1 December 2012	Bachamanda	Shruthi	USA	✓	✓	✓	✓			
Validator/TA (Team Leader until 30 November 2012)	Kapoor	Nitin	India	✓	✓	✓			✓	
Expert	Kapambwe	Misheck	Australia							✓
Technical reviewer	Yang	Weidong	USA					✓		
TA competence (support to TR)	Silon	Kyle	USA					✓	✓	

4 VALIDATION FINDINGS

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

The final validation findings relate to the PoA design as documented and described in the PoA-DD, version 4 dated 30 June 2014.

4.1 Comments by Parties, stakeholders and NGOs

The PoA-DD, version 1 dated 29 July 2011, was made publicly available on the CDM website and Parties, stakeholders and NGOs were through the CDM website invited to provide comments during a 30 days period from 2 August 2011 to 31 August 2011.

No comments were received from stakeholders during this period.

4.2 Approval, authorization and contribution to sustainable development

The coordinating/managing entity of the PoA is Up Energy Group, which is the entity that communicates with the Board.

The project participant is Up Energy Group of host Party of Uganda. The host Party (Uganda) meet all relevant participation requirements.

A letter of approval (LoA) /14/ was issued by DNA of Uganda on 13 May 2013, authorizing Up Energy Group of host Party as project participant and confirming that the PoA assists in achieving sustainable development.

The coordinating/managing entity has obtained a letter of authorization/14/ of its coordination of the proposed CDM PoA from the host Party.

The letters of approval were received from the project participants. DNV does not doubt the authenticity of the letters of approval. DNV considers the letters are in accordance with paragraphs 39-42 of the VVS /15/.

4.3 Modalities of communications

DNV received a written confirmation from the coordinating/managing entity that submits to it the MoC statement that all corporate and personal details, including specimen signatures, are valid and accurate/35/. The MoC was submitted to DNV directly by the coordinating/managing entity Up Energy Group /35/. DNV was further able to confirm using the Up Energy website /36/ that the official submitting MoC statement to DNV and the official who signed the written confirmation is duly authorized to do so on behalf of the Up Energy Group.

DNV has performed due diligence on the Modalities of Communications (MoC) statement submitted by the project participants in accordance with applicable requirements in the VVS as documented in section A.4 of Table 2 in the validation protocol in Appendix A to this report. DNV was able to confirm the information contained in the MoC and that the MoC complies with all relevant forms and requirements.

4.4 PoA design and description of each generic CPA

DNV considers the description of the PoA contained in the PoA-DD to be complete and accurate. The PoA-DD complies with the relevant forms and guidance for completing theThe PoA "Up Energy Improved Cookstove Programme" managed by Up Energy Group involves the promotion, distribution and sale of fuel-efficient improved cooking stoves (ICS) in Uganda. The ICS disseminated through this programme will replace the prevailing inefficient traditional biomass fired cook stoves. The ICS combusts wood more efficiently, and improves thermal transfer to pots, hence saving fuel (non-renewable biomass) and lowering greenhouse gas emissions.

The PoA is planned to be implemented within the boundary of Uganda. The physical boundary has been described in the PoA-DD/1/. The PoA will be coordinated by Up Energy Group.

Target users include:

- Residential Biomass Users: In rural areas users are typically reliant on wood fuel and use a range of technologies including both traditional fixed and portable stoves. In urban and peri-urban households the users typically but not exclusively rely on charcoal, and are usually employing traditional portable stoves.

- Institutional Biomass Users: These include groups such as hospitals, clinics, schools, restaurants and the like, that rely on biomass fuels and employing both traditional portable and fixed stoves.

The baseline for each target user group will be established at the CPA level and at the time of first inclusion of that target user group into a CPA.

The first SSC-CPA will replace baseline stoves with higher efficiency ICS models of the Ezy stove type. These stoves will be distributed to non-institutional biomass users by leveraging resources provided by the PoA. The PP plans to introduce more types of improved cook stoves in the future CPAs. Improved wood fuel cook stoves will be considered for the future CPA with a minimum thermal efficiency of 20% at the time of inclusion. The ICS that will be introduced in future CPAs will at a minimum have characteristics that improve the efficiency of combustion and thermal transfer to the pot or tortilla compared with a traditional stove. The cap will be fixed for each CPA at the inclusion stage to ensure that the small scale limit of 180 GWh_{th}/year is not crossed.

The length of the PoA is defined as 28 years in accordance with para 160, in accordance with Clean Development Mechanism project standard /16/. The starting date of the PoA is the date that the PoA-DD was published on the UNFCCC website, i.e. 2 August 2011. The start date of any CPA is on or after the start date of the PoA.

4.5 Demonstration of additionality for PoA

The additionality demonstration for the PoA has been done according as per "Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities", version 3.0 /20/.

DNV has reviewed the national policies related to energy, the Ministry of Energy and Mineral Development focus primarily on electricity, petroleum supply and petroleum exploration /38//37/. DNV was further able to confirm this during the face to face interview with the Ministry in Kampala /43/. DNV reviewed the environmental regulations using the National Environmental Management Authority (NEMA) website /33/. There is no reference of ICS and there is no mandatory legal requirement in Uganda to replace traditional inefficient three stone cook stoves with improved cook stoves /33//34/. Up Energy Group is a private entity and has no legal requirement to promote and sell improved cook stoves in Uganda. There is no public funding involved in the particular project activities included in this PoA. Hence, the project is not mandatory.

For small-scale project activities solely composed of isolated units where the users of the technology/measure are households or communities or small and medium enterprises (SMEs) and where the size of each unit is no larger than 5% of the small scale CDM threshold, the project is on the positive list for additionality. Hence the check for additionality is therefore carried out with the following eligibility criteria for each CPA:

- The nominal annual energy savings of each ICS is lower than 5% of the applicable limit for Type II small scale CDM project activities i.e. of 180 GWh_{th}.
- In each SSC-CPA-DD, it shall be demonstrated that the number of ICS to be distributed in a given CPA multiplied by the nominal energy savings of each ICS in a given CPA per annum is lower than the applicable limit for Type II small scale CDM project activities i.e. of 180 GWh_{th}.
- The project activities are solely composed of isolated units where the users of the technology/measure are households or communities or Small and Medium Enterprises (SMEs).

This approach has been verified to be in line with *Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities*, version 3.0 /20/ and has been found to be appropriate by DNV.

4.6 Demonstration of additionality of each generic CPA

The demonstration of additionality has been conducted at the PoA level and for a typical CPA a confirmation of additionality for CPAs is conducted by means of eligibility criteria included in Section 4.5 of this report. This approach has been verified to be in line with *Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities*, version 3.0 /20/, and it is demonstrated that in the absence of CDM, none of the CPAs would occur. This has been found to be appropriate by DNV.

4.7 Eligibility criteria for including CPAs to the PoA

The eligibility criteria for including CPAs are in accordance with the "Standard for demonstration of additionality, development of eligibility criteria, and application of multiple methodologies for programme of activities"/20/.

SSC-CPAs to be included under this SSC-PoA must fulfill the following eligibility criteria:

DNV confirms that the minimum eligibility criteria requirements from "Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities" /20/ have been included in the eligibility criteria for the PoA.

The eligibility criteria for including the CPAs to the PoA has been described below:

Eligibility Criteria			CPA Details
#	Description	Eligibility Criteria	
1	Boundary and location of the CPA	The CPA is located within Uganda. Please note that not all ICS installations may have been deployed at the CPA inclusion stage, however the location of the ICS can also be checked during verification. In the event that any deployed ICS is found to be outside of the project boundary/location, those ICS will not be counted in the emission reduction calculation.	Location and boundary is specified in the specific CPA-DD and supported with GPS coordinates.
2	No Double counting of ICS and CPAs within this PoA and across other PoAs	A unique numbering or identification system for the ICS installed is applied. This shall ensure no double counting of stoves within the PoA and ensure that stoves can be identified as belonging to this PoA and not to a PoA managed by any other CME. Please note that not all ICS installations may have been deployed at the CPA inclusion stage, however the ICS' unique numbering can also be checked during verification. In the event that any deployed ICS is found not to be in line with CPA double counting criteria, those ICS will not be counted in the emission reduction calculation. To further ensure no double counting, the CME shall ensure that each stove manufacturer signs exclusive sales rights to a certain stove model to the CME within country. If the manufacturer chooses to sell to customers other than the CME within a given country, then the	The unique numbering stamped on each ICS supported by the individual distribution record matching such information is included in the specific CPA-DD and consistent with the PoA DD Document: ICS Sales Receipts in Total Sales Record including CPA assignment and end user details (i.e. name, address). Additionally, the unique ID displayed on the stove itself. The unique numbering or identification regime is included in the specific CPA-DD and will be verifiable by the DOE. Relevant agreements with manufacturers or a master database will be provided at the time of verification.

Eligibility Criteria			CPA Details
#	Description	Eligibility Criteria	
		CME shall ensure that the manufacturer maintains a master database of all serial numbers of a given stove model that is sold to customers.	
3	No Double counting of CPA	The CPA is exclusively bound to the PoA. The CPA shall not be proposed as an individual CDM project and/or as a part of any other CDM PoA and/or any other mechanism to avail climate change mitigation benefits. A statement shall be included in the CPA-DD that the specific CPA will not be part of another single CDM project activity or CPA under another PoA and confirmed by the Partner Organization (PO) implementing the CPA.	A statement by the CME is included in the CPA-DD that the specific CPA will not be part of another single CDM project activity or CPA under another PoA. Evidence: This shall be cross-checked and verified by the CME with the UNFCCC, Gold Standard, and Voluntary Carbon Standard websites. In the case that other ICS activities are implementing the same ICS model as per the current CPA, the CME will provide the database for all ICS of that model implemented in any CDM activity. The CME will also facilitate as much information as possible on the distribution of those ICS to the extent possible.
4	Awareness and agreement of those operating a CPA on PoA subscription	Contractual provisions to ensure that those operating the CPA are aware and have agreed that their activity is being subscribed to the PoA. In the case that the CME is not responsible for implementing the CPA, the organization responsible for CPA implementation has signed a contractual agreement with the CME to participate in the PoA. This agreement:	Contractual agreement from CPA operators as part of their contract with the CME, stating that they are aware and have agreed that their activity is being subscribed to the PoA.

Eligibility Criteria			CPA Details
#	Description	Eligibility Criteria	
		- Defines the ownership of the carbon emission reduction rights - Covers the distribution and monitoring related responsibilities of the parties involved - Confirms that the ICS to be distributed under the CPA have not and will not be distributed under any other carbon project (CDM project, PoA or voluntary carbon market project) - Cedes the rights to the carbon credits generated from CPAs under the PoA to the CME.	
5	Non-diversion of ODA in case of public funding	The CME and the CPA operator (in case of being different from the CME) shall confirm that there is no public funding or in the case of public funding, the annex I party will confirm that funding is not a diversion of Official Development Assistance.	A statement is included in the CPA-DD informing whether the specific CPA is funded with Annex I country funding. If Annex I country funding is used, then the following documents will be provided by each funding party (the donor/s): Signed statement by the Annex I country donor party confirming that funding from Annex I country is not a deviation of ODA funding.
6	CPA Start Date	CPA start date shall not be before PoA validation start date (i.e. not prior to webhosting date for global stakeholder consultation). Please note that not all ICS installations may have been deployed at the CPA inclusion	Starting date as stated in the CPA-DD. Document: Each CPA shall provide verifiable evidence of the CPA start date as demonstrated by first ICS Sale

Eligibility Criteria			CPA Details
#	Description	Eligibility Criteria	
		stage, however the ICS start date can also be checked during verification. In the event that any deployed ICS are found not to be in line with CPA start date, those ICS will not be counted in the emission reduction calculation	Receipt.
7	CPA Crediting Period	CPA crediting period not to exceed the PoA end date and the starting date of the crediting period of a CPA shall be on or after: (i) The date of registration of the PoA, if the corresponding CPA-DD is submitted together with the request for registration; (ii) The date when the CPA was included in accordance with the Project cycle procedure;	A statement is included in the CPA-DD specifying the crediting period starting date and that the crediting period will not exceed the PoA end date (this is 28 years after the date of registration of the PoA).
8	Approval of CPA by CME	CME approved each CPA to be included into its registered PoA.	Statement of CME in each CPA-DD giving approval for the CPA to be included into its registered PoA. Document: CPA-DD section A.4.
9	Requirement of Methodology AMS-II.G V5- Efficiency improvements on existing biomass fired appliances	The CPA consists of replacement of conventional firewood cookstoves for biomass fired ICS as defined in section A.6 of the PoA-DD. Conventional stoves replaced will be any of the types identified by each baseline scenario and as applied by the specific CPA. Stove types replaced and implemented will be defined in the CPA-DD, and hence appliances involving the efficiency improvements in the thermal applications of non-renewable biomass as per AMS	Specification of conventional cookstoves replaced and ICS type/s implemented and compliance with the technological requirements of AMS II G V5 will be described in the specific CPA-DD. Document: Product data sheets or specification or product information sheets from manufacturer. Conventional stove type replaced shall also be demonstrated.

Eligibility Criteria			CPA Details
#	Description	Eligibility Criteria	
		II. G, ver. 5. Please note that not all ICS may have been deployed at CPA inclusion stage, the 'type and number of ICS deployed' will however also be checked during verification, and in case any deployed ICS type will be found not in line with the methodology requirement, those ICS will not be counted for emission reduction calculation.	
10	Requirement of Methodology AMS-II.G V5 – Minimum efficiency of the ICS / specification of technology including the level and type of service	The ICS disseminated under the CPA will be single pot, multi-pot or in-situ cookstoves that have a specified efficiency of at least 20% at the time of CPA inclusion.	Document: Efficiency specification from manufacturer, certificate from a national standards body, or a certifying agent recognized by it.
11	Technical requirement	Only ICS of the types below will be disseminated: - Biomass fuelled ICS - Newly operational ICS - Either fix/portable operation Other requirements (i.e type, maximum capacity, size or dimensions, fuel type, single or multi-pot and efficiency) are defined in the relevant eligibility criteria within this table. Please note that not all ICS may have been deployed at CPA inclusion stage, the technical requirement will however also be checked during verification, and in case any deployed ICS type will be found not to be in line with the technical requirement, those ICS will not be counted for emission reduction calculation.	Specification of stove type and compliance with the technological requirements of AMS-II.G, V5 will be described in the specific CPA-DD. Document: 1. Statement from CME that only new stoves will be disseminated under the CPA. 2. First ICS Sales Receipt, including specific language confirming the stove received by the end-user is new.

Eligibility Criteria			CPA Details
#	Description	Eligibility Criteria	
		The cookstove technologies will also meet minimum criteria as outlined below: - Stove Type and Model will be identified and shall include whether the stove is a single or multi-pot unit. - Thermal efficiency shall be equal to or greater than 20% - The maximum capacity shall ensure that the nominal annual energy savings of each ICS is lower than 5% of the applicable limit for Type II small scale CDM project activities i.e. of 180 GWhth - Stove size or dimensions will be provided - Primary fuel type will be specified to be charcoal or wood	
12	Requirement of Methodology AMS-II.G, V5 - Non-renewability of biomass	In accordance with methodology AMS IIG: Project participants are able to show that non-renewable biomass has been used since 31 December 1989, using survey methods.	Document: PoA-DD.
13	De-bundling	In accordance "Guidance for determining the occurrence of de-bundling under a Programme of Activities (PoA)*", if each independent subsystem/measures included in the CPA of a PoA is no greater than 1% of the small	Document: 1. Manufacturer specification. 2. CPA-DD to show energy saved by the ICS is less than 1.8 GWh_{th} /year using Excel

* According to the "Guidelines on assessment of debundling for SSC project activities, v03 (EB 54, Annex 13, par. 10) for determining the occurrence of debundling under a Programme of Activities (PoA)", if each of the independent subsystem/measures included in the CPA of a PoA is not larger than 1% of the small scale threshold defined by the methodology applied, then that CPA of the PoA is exempted from performing de-bundling check, i.e. considered as being not a de-bundled component of a large scale activity.

Eligibility Criteria			CPA Details
#	Description	Eligibility Criteria	
		scale threshold defined by the methodology applied, than that CPA of PoA is exempted from performing de-bundling check, i.e. considered as being not a de-bundled component of a large scale activity.	sheet or similar tool.
14	Applicability of Methodology AMS-II.G V5 and SSC Limit for CPAs	The CPA will remain under the thermal threshold of 180 GWh_{th}/a thermal energy savings (threshold as per clarification request SSC_233) throughout the crediting period of the CPA. If a CPA exceeds the applicable limit in any year, the claimable emission reduction shall be capped based on the estimated GHG reductions in the CPA-DD. Please note that not all ICS may have been deployed at CPA inclusion stage, the SSC limit for CPAs can however also be checked during verification, and in case any deployed ICS will be found not in line with CPA SSC Limit for CPAs requirement, those ICS will not be counted for emission reduction calculation.	The estimated maximum number of ICSs is to be defined in the specific CPA-DD. The amount of ICS operative per year will not exceed the "stove installation cap" established in the specific CPA-DD.
15	Additionality	Additionality of CPA shall be confirmed in line with the Requirements of "Guidelines for demonstrating additionality of small-scale project activities" Version 09.0 (Annex 27, EB 68). as described in Section B.1. of this CDM PoA DD. In each SSC-CPA-DD, it shall be demonstrated that: -The nominal annual energy savings of each ICS is lower than 5% of the applicable limit for Type II small scale CDM	The level of energy savings from the individual subsystems and the overall CPA are estimated using an Excel sheet or similar tool; the location of the CPA is defined in the CPA-DD; the end user groups are defined in the CPA-DD. At the time of joining the PoA, the maximum number of stoves required to reach the SSC threshold shall be

Eligibility Criteria			CPA Details
#	Description	Eligibility Criteria	
		project activities i.e. of 180 GWhth. -In each SSC-CPA-DD, it shall be demonstrated that the number of ICS to be distributed in a given CPA multiplied by the nominal energy savings of each ICS in a given CPA per annum is lower than the applicable limit for Type II small scale CDM project activities i.e. of 180 GWhth. - The project activities are solely composed of isolated units where the users of the technology/measure are households or communities or Small and Medium Enterprises (SMEs)	determined and documented in the CPA-DD. Once the maximum number of appliances under the threshold is reached (or before, as deemed appropriate), the CPA shall be closed and, depending on the circumstances, a new CPA may be included to accommodate any new stoves sold. - The CPA ICS Sales Database will confirm end users to be households.
16	Requirement of methodology - Generalities	Each CPA will ensure compliance with the applicability of the methodology and its requirements. Conditions of the applicability of the methodology and its requirements are demonstrated at the PoA level through the assessment of "application of the methodology" in section B.3 of the PoA DD.	The applicability of the methodology is established in the PoA-DD. The CPA needs to meet all eligibility criteria named "applicability of methodology" to meet the applicability criteria of the methodology.
17	Target groups	Target groups have been established by means of the baseline at the PoA level, as described in Appendix 3 of the PoA-DD. In summary, eligible target groups are any of the following: 1.Residential biomass users 2.Institutional biomass users Assumptions made at the PoA level for any scope regarding these target groups are deemed valid through all CPAs (i.e.	The selected target groups included in each CPA are distinguished in each CPA. The location of end-users will be recorded. Evidentiary documents could include but need not be limited to User Agreements and CPA ICS Sales Database, copy of the CME's contract with the PO, and/or agreements with distributors.

Eligibility Criteria			CPA Details
#	Description	Eligibility Criteria	
		baseline studies, ER calculation, monitoring plan).	
18	Distribution Mechanisms	Distribution mechanisms have been established in the PoA-DD by means of the "General operating and implementing framework of PoA" at the PoA level.	The selected distribution mechanisms included in each CPA are distinguished in each CPA. Evidentiary documents could include but need not be limited to information provided in the Sales Database, copy of the CME's contract with the PO, and/or agreements with distributors.
19	Local Stakeholder Consultation	The Local Stakeholder Consultation is established at the PoA level[*] as described in the PoA-DD. No further actions needed at the CPA level to satisfy the eligibility criteria.	Document: The conditions to meet the requirements on undertaking the local stakeholder consultation have been proven in the PoA-DD.
20	Environmental Impact Assessment	The EIA is established at the PoA level as described in section E of the PoA-DD[†]. No further actions needed at the CPA level to satisfy the eligibility criteria.	Document: The conditions to meet the requirements on undertaking the environmental impact assessment have been proven in the PoA-DD.
21	Sampling Requirements	Sampling of appliances within the CPA must meet the requirements of AMS-II.G, V5 and the "Standard on Sampling and Surveys for CDM Projects and Programmes of Activities" (the Sampling Standard) Version 4.0, (Annex 06, EB 74) Each CPA will ensure compliance with the framework established for sampling requirements for quantification of parameters not established at the ex-ante and monitoring tasks during the crediting period. Conditions and its requirements are outlined for baselines and the	Specification of the sampling methods applied and compliance with the sampling requirements will be described in the specific CPA-DD for the rest of the CPAs. The CPA-DD either specifies that: a) Sampling will be undertaken as part of the PoA Sampling Plan, and in the CPA-DD describes how the PoA Sampling Plan is to be applied; or b) If CPA-specific

[*] EB55 Annex 38, paragraph 6 (g).
[†] EB55 Annex 38, paragraph 6 (f).

Eligibility Criteria			CPA Details
#	Description	Eligibility Criteria	
		monitoring tasks at the PoA-DD.	sampling is to be undertaken, a CPA-specific Sampling Plan must be provided and meet the requirements of AMS-II.G V5 and the Sampling Standard. The sampling approach shall follow the approach outlined in the PoA Sampling Plan except where specifically indicated otherwise in the CPA Sampling Plan.
22	Baseline parameters to be established at CPA level	Each CPA shall demonstrate how the baseline parameters for baselines not established at the PoA level (that applies for institutional baselines not applicable at the first CPA at the time of PoA registration) that are to be calculated at the CPA level have been determined. Parameters to be monitored are listed in the CPA-DD	The CPA-DD shall outline the approach and provide supporting documents including copies of any official government reports, statistics or literature sources used for determining parameters. If local surveys or representative sampling are used then copies of questionnaires, sampling design etc. shall be provided.

4.8 Application of methodologies

The PoA and consequently each CPA applies the simplified baseline methodology for selected small-scale CDM project activity; AMS-II.G," "Energy efficiency measures in thermal editions of non-renewable biomass", version 5 /17/.

4.9 Management system of the PoA

The management system of the proposed PoA is in accordance with the "Standard for demonstration of additionality, development of eligibility criteria, and application of multiple methodologies for programme of activities" /20/.

The CME has demonstrated that it has the competency to check the features of potential CPAs and ensure that each CPA meets all requirements and eligibility criteria before inclusion in the

registered POA. The CME has developed a management system that includes the following made available to the DOE at the time of the validation of the PoA:

	Requirement	**Procedure put in place to meet the requirement**
a)	A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies;	The CME has provided a clear definition of roles and responsibilities in the process of inclusion of CPAs of the PoA DD, Section C The database administrator is responsible for updating and maintaining all electronic databases and inclusions. Required competencies include experience with data management systems (e.g. Excel, STATA, or SPSS), minimum 2 years working experience in a similar field, and at minimum a Bachelor's degree from an institution of higher education. The monitoring team will be assigned by the CME to conduct the user interviews and appliance tests during the periodic sampling and reports the results to the database administrator.
b)	Records of arrangements for training and capacity development for personnel	The CME will ensure that the CPA operators will be adequately trained. A description of the modes of training and the types of documentation that will be submitted to demonstrate that the trainings have been conducted is described in section C of the PoA DD/1/. The skills and experience required for the monitoring team for the data collection activities include: a. Experience conducting surveys/tests b. Experience conducting door-to-door surveys of biomass consumption c. Local language skills (especially important for input to questionnaire design and interviewing of end users) d. English language skills e. Cultural awareness f. Numerical proficiency g. Data entry skills
c)	Procedures for technical review of inclusion of CPAs	The technical review of the CPA inclusion is conducted by the CME through the eligibility criteria. This is described in Section C, (c) of the PoA-DD. The CME has provided a detailed description of eligibility criteria, accepted mean of proof and the document that needs to be submitted as evidence. The eligibility criteria have been

		described in section B.2 of the PoA DD/1/.
d)	A procedure to avoid double counting (e.g. to avoid the case of including a new CPA that has already been registered either as a CDM project activity or as a CPA of another PoA);	Double counting of individual ICS and of CPAs (in other PoAs) has been addressed by including this as one the eligibility criteria's in the PoA DD. The procedure to avoid double counting has been described in section C (d) of the PoA DD/1/, the means of proof that the DO of the CPA needs to provide at the CPA inclusion stage to demonstrate no double counting is given in section C (d) of PoA DD/1/.
e)	Records and documentation control process for each CPA under the PoA	The CME has provided a detailed description of the records and document control process for each CPA under the PoA. This has been described in section C (e) of the PoA DD /1/.
f)	Measures for continuous improvements of the PoA management system;	The CME has included measures for continuous improvement. Continuous improvement will be through training of monitoring staff, ensuring appropriate skills and experience, CME reviewing information gathering technique and information flow and partner feedback. This information is described in Section C (f) of the PoA-DD.
d)	Monitoring procedure	DNV has been able to confirm that all indicators of importance for controlling and reporting of project performance are incorporated in the monitoring plan. The procedures for surveys and maintenance, performance reviews, internal auditing, corrective actions etc. has also been defined in the monitoring plan.

4.10 Environmental impacts

This is a small scale project that promotes the distribution of improved cool stoves in Uganda. No Environmental Impact Assessment (EIA) has been performed, because there is no legal obligation according to the National Environmental Management Authority (NEMA) of Uganda/33/.

No significant environmental impacts are expected from the project activity. The local authorities could confirm this issue during stakeholder consultations/46/, the outcomes of the First Round Consultation did also not result in any negative comments of significant impacts of the proposed project on the environment.

4.11 Local stakeholder consultation

The stakeholder consultation has been conducted at the PoA level. DNV considers the local stakeholder consultation carried out adequately.

Two local stakeholder consultations were held, one on 17 May 2011 the second on 31 May 2011 in Kampala /1//46/. The relevant stakeholders were consulted at the following two stages:

- Consultation of local stakeholders in the design phase (Initial Stakeholder Consultation);
- Consultation of (local) stakeholders in the PoA-DD developing phase (Main Stakeholder Consultation).

Two meetings were conducted in Kampala, in order to ensure participation from local users and other stakeholders. As part of the stakeholder consultation, the following activities were completed:

- Interviews with NGOs, public authorities and private relevant parties.
- Pilot cook stoves delivered to gather feedback through focus groups and field surveys.
- Performance tests among selected improved cook stoves.
- Two public meetings, one in the urban context with high-level parties relevant to the activity, the other in the rural context with local representatives and potential project beneficiaries.

There were no adverse comments on the proposed project received during the stakeholder consultation. A variety of comments and suggestions were received from attendees, mainly focused on the need for raising awareness and training. These were all were taken into account by the PP.

DNV visited the community where the stakeholder consultation was conducted in Nsangi Sub County in Wakiso District. DNV interviewed the community head /46/ and interviewed the local households /45/ that were part of the stakeholder interview process and pilot study. DNV was able to confirm that the project participants were successful in reaching out to the community, creating awareness of the project and ensuring all comments were addressed. DNV also interviewed the households that are currently using the improved stoves. All comments received during the interview process were positive. DNV considers that:

- PP has used appropriate methods to invite stakeholders.
- Relevant stakeholders including NGO's, government bodies, and local users have been invited.
- Stakeholder comments received during the meeting have been appropriately addressed.

The stakeholder comments received have been documented in the PoA DD /1/and have been taken into account. No negative comments were received during the stakeholder consultation meeting.

4.12 Application of selected baseline and monitoring methodology(ies) by each generic CPA

The assessment of the generic CPA's compliance with the applicability criteria of AMS-II.G (version 05) are documented in detail in section B.2 of Table 2 in the validation protocol in Appendix A to this report.

The following eligibility criteria (refer to section 4.7 for the complete list of eligibility criteria) ensure that a CPA meets the conditions that ensure that CPAs meet the requirements pertaining to the applicability of the methodology.

The criteria # 14 has been included to meet the applicability criteria for the methodology and to ensure that CPA is within the SSC threshold.
Criteria #14: The CPA will remain under the thermal threshold of 180 GWh_{th}/year thermal energy savings throughout the crediting period of the CPA. If a CPA exceeds the applicable limit in any year, the claimable emission reduction shall be capped based on the estimated GHG reductions in the CPA-DD.

Please note that not all ICS may have been deployed at CPA inclusion stage, the SSC limit for CPAs can however also be checked during verification, and in case any deployed ICS are found not in line with CPA SSC Limit for CPAs requirement, those ICS will not be counted for emission reduction calculation.

The estimated maximum number of ICSs is to be defined in the specific CPA-DD. The amount of ICS operative per year will not exceed the "stove installation cap" established in the specific CPA-DD.

Each CPA-DD will establish the "ICS installation cap" through the ER calculation tool developed based on the relation between the "energy cap established for this type of activity" (180 GWh_{th} /year) and the "energy savings per ICS". This relation will vary according to the parameters monitored along the CPA life cycle, for instance U_y (Average usage rate (as opposite to drop-off) of appliances of type being deployed during period y as part of the SSC-CPA) and η_{new} (Efficiency of the system being deployed as part of the project activity (fraction), as determined using the Water Boiling Test (WBT) protocol. Use weighted average values if more than one type of system is being introduced by the project activity). Therefore an updated "ICS installation cap" will be provided at the time of verification according to the monitoring results.

Other requirements under the methodology AMS-II.G, version 5 are:

- This category comprises appliances involving the efficiency improvements in the thermal applications of non-renewable biomass. Examples of these technologies and measures include the introduction of high efficiency biomass fired cook stoves or ovens or dryers and/or improvement of energy efficiency of existing biomass fired cook stoves or ovens or dryers.
    - The project involves the efficiency improvements in the thermal applications of non-renewable biomass/1/. The programme proposes to distribute improved cook stoves that will improve the efficiency of cook stoves that use non-

renewable biomass as fuel (including non-institutional biomass users and institutional biomass users).

- The PP has demonstrated using literature from Forestry Outlook studies for Africa (FOSA) and Food and Agriculture Organization of the United Nations (FAO) that non-renewable biomass has been used in Uganda since 31 December 1989. The PP has evidenced that starting from 1971; there has been a significant decrease (around 50%) of forested area in Uganda. According to the FOSA study in Uganda, from 1988 to 1999, wood production increased by 1% faster than the population growth. In a country with already high levels of population growth, this implies an over exploitation of forest resources./**42/** During the rule of Idi Amin (1971-1979), civil and political conflict had severe consequences for forest resources in Uganda. From 1971 to 1987, Uganda lost 50 percent of its forests, including virtually all of its primary forests. Between 1990 and 2005, Uganda lost 26.3 percent of its remaining forest cover, and current deforestation continues at a rate of 2.2 percent per year./43/ The population in Uganda traditionally uses wood from forests (collecting directly or purchasing from wood suppliers) for cooking. With reduction in forested area from 1971, the forested area is considered non-renewable and hence, wood used for fuel is non-renewable biomass.

Therefore, the applicability conditions and other requirements of AMS-II.G, version 5 /17/, are satisfied and met completely. The applicability criterion and other requirements is included in the PoA eligibility criteria (Section B.2 of the PoA-DD, No. 9, 10, 12, 14 and 16) and all CPAs that propose to be included to this PoA, shall meet these eligibility criteria.

4.13 Project boundary of each generic CPA

The identified boundary and selected sources and gases are justified for the generic CPA. The validation of the generic CPA did not reveal other greenhouse gas emissions occurring within the proposed CPA boundary as a result of the implementation of the proposed CPA which are expected to contribute more than 1% of the overall expected average annual emission reduction, which are not addressed by AMS-II.G (version 05).

The programme system boundary includes physical, geographical site of the efficient systems using biomass included in the PoA in accordance with AMS-II.G, version 05 /17/. Thus, the programme system boundary is the country of Uganda where the efficient systems using biomass will be distributed as part of this PoA. The CPA boundary will not be limited to a specific region. The CPA implementer can choose the boundary to be a specific region or the country of Uganda. The cook stoves under a specific CPA will be identified by the unique serial number that will be embedded on the cook stove.

The selected sources and gases are justified for the project activity. Emission sources and gases included in the project boundary are:

Table 1: GHG emissions included in SSC-CPAs and SSC PoA

	GHGs involved	*Description*
Baseline emissions	CO_2	Emissions from the use of fossil fuels for meeting similar thermal energy needs.

Project emissions	CO_2	Emissions from the use of wood fuel from cooking using the energy efficient cook stove.
Leakage	CO_2	Potential sources – Increase in the use of non-renewable biomass outside the project boundary to create NRB baselines or Use of NRB saved under the project activity to justify the baseline of other CDM project activities

4.14 Baseline scenario identification and description for each generic CPA

The baseline scenario has been identified in accordance with AMS-II.G, version 05 /17/. In absence of the PoA, the local households in Uganda would continue to use traditional cook stoves with non-renewable biomass as fuel. Thus, in line with the methodology it is assumed that in the absence of the project activity, the baseline scenario would be the use of fossil fuels for meeting similar thermal energy needs.

4.15 Algorithms and/or formulae used to determine emission reductions of each generic CPA

4.15.1 Explanation of methodological choices

The program proposes to distribute stoves to three separate target groups, the 1) non-institutional biomass users and 2) institutional biomass users. The SSC-CPAs will calculate emission reductions from each of the target groups separately through application of the following equations:

$$ER_y = (B_{y,savings} \cdot N_y \cdot U_y) \cdot (f_{NRBy} \cdot NCV_{biomass} \cdot EF_{projected\_fossilfuel})$$

where:

ER_y	Emission reductions during the year y in tCO_2e
$B_{y,savings}$	Biomass that is saved in tonnes per appliance. This parameter is determined at the time of each CPA inclusion using one of the three below mentioned options.
$f_{NRB,y}$	Fraction of biomass saved by the project activity in year y that has been established as non-renewable biomass – 82% - default value/23/
$NCV_{biomass}$	Net calorific value of the non-renewable biomass that is substituted (IPCC default for wood fuel, 0.0156 TJ/tonne)
$EF_{projected\_fossilfuel}$	Emission factor for the substitution of non-renewable biomass by similar consumers. The substitution fuel likely to be used by similar consumers is 81.6 tCO_2/TJ for Kerosene.
N_y	Total number of appliances of the type being deployed during period y as part of the SSC-CPA
U_y	Average usage rate (as opposite to drop-off) of appliances of type being deployed during period y as part of the SSC-CPA

The PP estimates $N_{y,i}$ – Number of project devices of type I operating in year y, by multiplying the number of cooks stoves deployed (N_y) into the U_y - Average usage rate (as opposite to drop-off) of appliances of type being deployed during period y as part of the SSC-CPA. The usage rate is monitored biennially using survey.

AMS-II.G, version 05 provides three options to calculate $B_{y,savings}$. Any of the three options can be used to estimate $B_{y,savings}$ for the future CPA inclusions. $B_{y,\ savings}$ will be estimated separately using the below options:

When using AMS-II.G version 05**, Option 1:**

$$B_{y,savings} = (B_{old} * L) - B_{y,new,KPT} \qquad \textbf{Equation (2)}$$

Where:

B_{old}	Quantity of woody biomass used in the absence of the project activity in tonnes per appliance
$B_{y,new,KPT}$	Annual quantity of woody biomass used per appliance during the project activity in tonnes, measured as per the Kitchen Performance Test (KPT) protocol. The KPT should be carried out in accordance with national standards (if available) or international standards or guidelines (e.g. the KPT procedures specified by the Partnership for Clean Indoor Air (PCIA) <http://www.pciaonline.org/node/1049)>
L	Leakage adjustment factor

When using AMS-II.G version 05**, Option 2**:

$$B_{y,savings} = (B_{old} - \mu_{old}) * L * (1 - \eta_{old} / \eta_{new})$$

Where:

B_{old}	Baseline wood fuel consumption per appliance (i.e. in the absence of the project activity)
μ_{old}	Quantity of woody biomass for the continued use of old stoves per household
η_{old}	1. Efficiency of the system being replaced, measured using representative sampling methods or based on referenced literature values (fraction), use weighted average values if more than one type of system is being replaced; 2. A default value of 0.10 may be optionally used if the replaced system is a three stone fire, or a conventional system with no improved combustion air supply or flue gas ventilation system, i.e. without a grate or a chimney; for other types of systems a default value of 0.2 may be optionally used
η_{new}	Efficiency of the system being deployed as part of the project activity (fraction), as determined using the Water Boiling Test (WBT) protocol. Use

weighted average values if more than one type of system is being introduced by the project activity. (η_{new} = "$\eta_{specific}$".- for year 1 when the technology is introduced to the PoA)

L Leakage adjustment factor

When using AMS-II.G version 05**, Option 3:**

$B_{y,savings} = (B_{old} - \mu_{old}) * L * (1- SC_{new}/SC_{old})$

SC_{old} Specific fuel consumption or fuel consumption rate of the baseline system/s i.e. fuel consumption per quantity of item/s processed (e.g. food cooked) or fuel consumption per hour, respectively. Use weighted average values if more than one type of system is being replaced

SC_{new} Specific fuel consumption or the fuel consumption rate in year y of the devices deployed as part of the project i.e. fuel consumption per quantity of item/s processed (e.g. food cooked) or fuel consumption per hour respectively. Use weighted average values if more than one type of system is being introduced by the project activity

L Leakage adjustment factor

Generalities

B_{old} is calculated as (Para.13 (a) from AMS-II.G V5) the estimate of average annual consumption of biomass per appliance (tonnes/year) as derived from historical data or a survey of local usage.

As per AMS.II.G./Version 05, B_{old} is multiplied by a net to gross adjustment factor of 0.95 to account for leakages (L).

Monitoring and discounts

1 Continued use of the baseline technology – the use of the traditional stoves in parallel with the ICS will be monitored through surveys. The fuel consumed in the traditional stoves will be discounted from B_{old}.
   1.1 Option 1- taken into account in the KPT test
   1.2 Option 2 and 3 – subtracting μ_{old} from B_{old}
2 Replacement of fuels other than biomass fuel: The PP will record the type of fuel and baseline technology used in the households prior to the sale of the ICS. Only stoves using biomass will be included in this project activity.

4.16 Parameters determined ex-ante

The following parameters are determined *ex-ante*. The *ex-ante* values in the below tables are determined for the first CPA Up Energy Improved Cookstoves Programme, Uganda – CPA No 001 and are also determined ex-ante for all other future CPAs to be included into the PoA.

The parameters that have been established for Up Energy Improved Cook stoves Programme, Uganda – CPA No 001 cover the geographic boundary of the CPA No 001, which includes the Host Country Uganda. This includes the baseline survey that was conducted for Uganda to establish the baseline wood consumption per appliance B_{old}.

Many of the parameters will be estimated using survey. The sample size and desired precision is standard across all parameters and is in line with the requirements of AMS-II.G, version 05 /17/.

The sampling methodology and the sampling size calculation for the parameters has been described below:

Sampling Methodology

Sampling Objective – The sampling objective for each parameter is to determine via survey a statistically significant value for the emission reduction calculations. These parameters are defined in the tables presented in section B.6.2 of the PoA DD under "Data / Parameter".
Field Measurement Objective and data to be collected – This is defined in the tables in PoA-DD, Part II, Section B.7.1 under "Description".
Target population and sampling frame – The target population is the population served under the specific CPA within the PoA, and the sampling frame consists of end-users of the ICS as recorded in the Sale Record. The target population and the sampling frame for each parameter has been specified in Section B.6.2 and B.7.1 of the PoA DD. The sampling frame will be kept in hard-copy form for 2 years following the crediting period or the last issuance of the CERs of the project activity. In the case of multi-stage sampling, the sampling frame is a complete listing of sub-groups of the study area/population which constitutes all the primary sampling units. In developing sampling frames the implementer of the survey effort shall compile a clear description of the target population, including those characteristics of the population which define membership (as in the diagram shown in the PoA DD, Section B.7.2.). From the description and characteristic the implementer can then select a sampling frame appropriate for the study.
Sample method – Project circumstances may allow for single stage or 2-stage random sampling approach. One example of a 2-stage random sampling approach for ex-post monitored parameters would be to provide a first-stage sampling frame consisting of all households serviced across all CPAs categorized as per the Sample Frame – all listed by village. Random sampling of villages from the first-stage frame would provide a subset of areas to sample from. In the second stage, the sampling frame would consist of all households serviced in the randomly selected villages. Random sampling would then be conducted from the second-stage frame. To ensure a random sample selection, random number generators shall be applied. Then, a selection system will be used to select samples from the Project Database. Each ICS in the target population is uniquely identifiable by its Serial ID number. Each ICS within a sampling frame can thus be allocated a Sample Selection Number in each monitoring period, starting at 1 and increasing up to the total number of ICSs in the Total Sales Record for that pre-defined sampling frame. Applying the random number

generators, the ICS can then be randomly chosen from the defined population up to the required sample size as calculated by the CME. This will be done for each group of CPAs within a defined sampling frame or for each CPA in the case that CPAs are not grouped up for monitoring.
At the second stage, simple random sampling will be used to select samples from the Project Database for monitored parameters. Optionally, other sampling approaches may be used in accordance with "Guideline for Sampling and Surveys for CDM Project Activities and Programme of Activities", when sampling techniques or statistical analysis necessitates it.
Implementation - The sampling for surveyed or monitored data will be implemented consistent with the approach described above unless survey results necessitate additional or alternative statistical analysis techniques.
Monitoring shall be carried out by the operating entity of the CPA according to the procedures and monitoring framework as follows and will be submitted to the managing entity. The managing entity will store the data in an electronic database or other appropriate data archive. Primary data will be stored by the implementing entities/operators.
Desired precision / expected variance and sample size – unless otherwise noted in the description of the monitored parameter in Section B.6.2 of the PoA DD, and as allowed by the methodology, the sample size will be chosen for a 90/10 precision (90% confidence interval and 10% margin of error) if a sampling plan is developed for each CPA, and where there is no specific guidance in the applicable methodology, as the criteria for reliability of sampling efforts for small-scale project activities /22/, except when a single sampling plan covering a group of CPAs is undertaken, in which case 95/10 confidence/precision is applied for the sample size calculation.

Sample Size Calculation

Sample sizes will be sufficient to ensure that the precision of the sample means are in accordance to the Sampling Frame established for the CPA within the PoA to estimate emissions reductions. In cases where survey results indicate that desired precision is not achieved, the lower bound of corresponding confidence interval of the parameter value may be used as an alternative to repeating the survey. Alternatively, the survey may be expanded to reach the required confidence/precision. Technology types from a given project scenario are selected using representative sampling techniques to ensure adequate representation of technologies types of different ages

Standard for Option 1, 2 and 3	
$B_{old\,l}$	Baseline wood fuel consumption per appliance (i.e. in the absence of the project activity) (*y*) (Determination method described after the table)
	Description: The baseline fuel consumption per appliance will be determined at the CPA level. The data can be sourced from historic data or surveys. In case of surveys, the sampling design for this parameter has been described in the PoA DD-Section B.7.2.

$f_{NRB,y}$	Fraction of biomass saved by the project activity in year y that has been established as non-renewable biomass – 0.82 Default value /23/
$NCV_{biomass}$	Net calorific value of the non-renewable biomass that is substituted (IPCC default for wood fuel, 0.015 TJ/tonne)
$EF_{projected\_fossilfuel}$	Emission factor for the substitution of non-renewable biomass by similar consumers. The substitution fuel likely to be used by similar consumers is 81.6 tCO_2/TJ –AMS-II.G, version 05
L_y	Leakage factor in year '*y*' – 0.95 default factor – AMS-II.G, version 05 /17/
Option 2	
η_{old}	Efficiency of the system being replaced, measured using representative sampling methods or based on referenced literature values (percent) One of the three following methods may be chosen to determine η_{old} ✓ Default value as provided in AMS-II.G Version 5.0 (10%) ✓ Representative sampling using the Water Boiling Test (WBT) and standards as prescribed under the methodology. ✓ Referenced literature values where pre-existing test data is available that meets the methodological requirements.
$\eta_{specified}$	Efficiency of the system being deployed (percentage %). At the ex-ante phase the value of efficiency of the improved cook stove being distributed is estimated to determine whether the stove meets the minimum efficiency of 20% to meet the eligibility criteria. This parameter will be monitored ex-post as η_{new}. The efficiency of the stove being introduced as part of the project activity can be estimated using the below options: 1) Manufacturers specification
Option 3	
SC_{old}	Determined at the CPA level Specific fuel consumption or fuel consumption rate of baseline stove, determined from Controlled Cooking Test (CCT) One of the two following methods may be chosen to determine: Representative sampling using the Controlled Cooking Test (CCT) as per CCT protocol and standards as prescribed under the methodology. Referenced literature values where pre-existing test data is available that meets the methodology requirements.

All data will be kept for 2 years following the crediting period or the last issuance of the CERs of the project activity.

The parameter f_{NRB} have been determined ex-ante at the PoA level and is applicable to all CPA included in Uganda.

4.16.1 Baseline Studies:

B_{old} is determined at the CPA level.

For CPA 001 - The Baseline wood fuel consumption per appliance – Residential biomass users has been described below:

The PP has conducted a baseline survey to estimate the fuel consumption for "Residential biomass users" in rural and urban areas. The PP has demonstrated that the survey's sampling design meets the requirements of "Standard for sampling and surveys for CDM project activities and programme of activities"/22/.

The sampling design used by PP is described below:

Target population:
The target population of this baseline consists of all non-institutional users of biomass fuelled cook stoves in Uganda.

Objective:
The purpose of establishing this baseline scenario (baseline scenario 1: "Non-institutional biomass users") is to facilitate the quantification of fuel consumed by this target population in the absence of the program activity. Amongst this population, the project activity provides improved cook stoves to households using firewood and/or charcoal fuel on traditional stoves or 3-stone fires.

Description and Reliability Requirements:
Baseline information for Uganda was derived from data gathered through national surveys, self-reported fuel consumption, and in-home measurements of the weight of fuel consumed on a typical day. The study was led by the Centre for Integrated Research and Community Development Uganda (CIRCODU), and commissioned by Impact Carbon for the purpose of this program activity in 2011/**8**/. The methodology requires that the sampling meets 90/10 precision. The PP sampled 407 households across four regions of Uganda to ensure that the precision was reached. DNV considers this method to be satisfactory to obtain data from a large sample size.

Sampling Method:
The sampling approach therefore chose to employ a combination of Stratified Random sampling and Clustered sampling. The divisions in the country of Uganda are:

Country > regions > districts > sub-countries > parishes > households

Based on that the following was the sample method chosen:

Firstly, stratified representative sampling was applied at the national level by disaggregating the country into its four primary administrative regions: Central, Eastern, Northern and Western. These regions have become the natural boundaries for government statistical surveying and reporting regarding energy and fuel patterns.

Secondly, for this study the population was further stratified into urban and rural communities to capture the diversity of fuel usage commonly observed in high and low density communities (ie. charcoal fuel more common in urban areas, and wood fuel in rural areas). Clustered sampling from each region was then chosen for surveying rural and urban contexts.

Clustered random sampling was repeated in each district sampling frame to reflect the greater population. Randomization was ensured by choosing a district within each region against a list of districts. Additionally, professional expertise and local knowledge by the in-country team was applied to exclude non-representative cases. Districts not accounted for obvious reasons for the survey include:

- Districts showing political unrest, or concerns on safety for the survey team
- Districts on the border with neighbour regions that may be known to show mixed cultural customs
- Districts with difficult/restricted access (i.e. no airport/road communications) that may difficult the access/mobility to select sample
- Districts traditionally known to have non-representative cooking practices to the region where they belong.

Based on the above the following districts were chosen for each to be surveyed:

- Kabarole District and Bushenyi District to represent the Western region,
- Mukono District and Mityana District to represent the Central region,
- Soroti District and Bugiri District to represent the Eastern region,
- Arua District and Gulu District to represent the Northern region.

Followed, within each district two different sub-counties were chosen to perform the urban survey and two more to perform the rural survey based again on the same criteria as for the selection of the districts. Subsequently, various parishes or zones distant from one another in each of the divisions to ensure representativeness, and finally, different households were chosen covering the total parish area to obtain a spread sample by selecting HHs every certain number. Accessibility and local authorities' permission were the basis for selecting a parish/zone.

Local authorities and chiefs where consulted throughout the process to obtain their consent and support the sampling methods.

Quality Assurance & Quality Control:
Quality assurance measures were put in place to ensure data quality during each phase of collection, transcription, and analysis. Bias and missing data errors were mitigated through protocols for training, data collection, and data management.

Sample Size:
For a confidence/precision of 90/10 per CDM surveying and sampling guidelines, the recommended sample size to obtain the baseline fuel consumption (by means of the KPTs) is at least 42 households across Uganda (established as the minimum sample size for this case study) (Assumptions: Margin of error = 10%, Confidence = 90%, Covariance typical for a KPT = 0.4). Instead baseline fuel wood consumption was established using data from in-home fuel weighing on a 407 of surveyed households from both rural (305) and urban (102). The sample size used for the survey met the requirement of the 90/10 /1//6/confidence interval and precision level requirement of the methodology AMS-II.G, version 05 /17/.

Sampling Frame:
The target population was household's typically consuming biomass within the country of Uganda. Households using biomass for cooking in Uganda are typically low-medium income population, either rural or urban and indistinctively spread all over the country across the four regions.
A baseline survey has been conducted across four regions of Uganda (Western, Northern, Eastern and Central), distributed as follows:

- Kabarole: 51 surveys
- Bushenyi: 51 surveys
- Mukono: 50 surveys
- Mityana: 52 surveys
- Pader: 50 surveys
- Gulu: 50 surveys
- Soroti: 52 surveys
- Bugiri: 51 surveys

The baseline survey results established that the main types of fuel used in Uganda are wood fuel and charcoal. The baseline wood fuel stove is the three stone cook stove, charcoal stoves include the traditional metal and ceramic stove without air control. Through the surveys the project proponent was able to identify that 24% of the houses used a mixture of wood fuel and charcoal. The amount of biomass fuel savings in rural and urban areas were estimated through verbal communication during the baseline surveys/6//7//8/. Additional description on the baseline survey is provided in Appendix 3 of the PoA-DD.

Based on this, overall baseline biomass (firewood + charcoal) consumed per household, after the application of the 90/10 statistical analysis, and considering the charcoal conversion factor of 6 (Uganda) **/6/**, the baseline fuel consumption value is as given below:

	Biomass consumption in firewood + charcoal (t/HH-yr)
Rural	4.97
Urban	7.02

During the site visit in Uganda, DNV interviewed the team conducting the survey and also observed the survey being conducted by the team in Mityana, Uganda. DNV was able to confirm that a qualified team conducted the survey and sampling design used is robust. DNV confirms that the PP's estimate is reasonable and supported adequately by credible and sufficient evidence from literature **/6//7//8/**.

4.17 Monitoring plan

The monitoring plan is in compliance with the monitoring methodology AMS-II.G (version 05).

It is DNV's opinion, that the project participants are able to implement the monitoring plan.

4.17.1 Parameters monitored ex-post by each generic CPA

Most of the parameters monitored will be monitored throughout the use of a survey. The survey design for all the parameters has been described in the table below:

The PP has designed a sample size calculation tool to describe step by step the method in place and to estimate the minimum sampled needed to satisfy statistical requirements /22/ for each monitoring parameter according to its sampling approach. Thus, the sample size calculation tool to be used has been developed for each monitored parameter. The sampling design for each parameter is described in Section B.7.2 of the PoA DD.

The Parameters monitored ex-post as listed below:

Parameter	**Monitoring methodology**	**Frequency**
N_y	Description: Total number of appliances – Sales Record *No survey required for this parameter.*	Ongoing
U_y	Description: Average usage rate of each appliance type being deployed during period y as part of the SSC-CPA. Field survey by a dedicated team at minimum every 2 years. Ex-post monitoring and surveys will determine the number of appliances still in operation. All data will be kept for 2 years following the crediting period or the last issuance of the CERs of the project activity.	Biennial
Option 1		

<table>
<tr><td>$B_{y,new,KPT}$ -</td><td>Description: Quantity of woody biomass used during the project activity by the improved stove technologies in tonnes

The quantity of biomass used during the project activity will be determined through surveys using field tests – KPT

The sampling size and sampling method will be conducted as described in Section B.7.2.

The KPT will be carried out in accordance with national standards (if available) or international standards or guidelines (e.g. the KPT procedures specified by the Partnership for Clean Indoor Air (PCIA) <http://www.pciaonline.org/node/1049>)

The results of the KPT will be taken from a representative sample basis with 90/10 precision level. In case the 90/10 precision is not achieved; the lower bound of a 90% confidence interval will be used.</td><td>Annual</td></tr>
<tr><td>Option 2</td><td></td><td></td></tr>
<tr><td>η_{new}</td><td>Description: Efficiency of the appliance being deployed as part of the SSC-CPA, weighted average if multiple systems.

The efficiency of the appliance will be determined using WBT for a representative sample

As per paragraph 12 and 23 (b) of AMS-II.G Version 5.0.
The WBT will be carried out in accordance with national standards (if available) or international standards or guidelines.

The sampling size calculation has been described in the PoA DD, Section B.7.2. The sample size calculation considers project specific anecdotal and pilot data, which results in a sample size 31 [ηnew] for mean values. Thus, a sample size of 37 for [ηnew] can be targeted to achieve the 90/10 precision level (assuming 20% over-sampling, and minimum sample size for all parameters within a sampling frame to be 30 samples).

<table><tr><th colspan="3">Ex-Ante Sample Size - Simple Random Sampling Per Sample Frame</th></tr><tr><th>Parameter</th><th>Calculated</th><th>20% Over-Sample/Minimum</th></tr><tr><td>η_{new}</td><td>31</td><td>37</td></tr></table></td><td>Biennial</td></tr>
<tr><td>Option 3</td><td></td><td></td></tr>
</table>

SC_{new}	Description: Specific fuel consumption of the fuel consumption rate of the system/s deployed The fuel consumption rate of the systems deployed will be determined using CCT of a representative sample, weighted average if multiple systems as deployed. The CCT will be carried out in accordance with national standards (if available) or international standards or guidelines (e.g. the CCT procedures specified by the Partnership for Clean Indoor Air (PCIA) <http://www.pciaonline.org/node/1050>). These will be done on a representative sample basis with 90/10 precision level. In case the 90/10 precision is not achieved; the lower bound of a 90% confidence interval will be used.	Annual
Option 2 and 3		
μ_{old}	According to AMS-II.G, version 05, 20 (b), If baseline stoves continue to be used, monitoring shall ensure that the fuel-wood consumption of those stoves is excluded from B_{old}. Description: Quantity of woody biomass used in the project activity by traditional stoves per household The CPA shall measure changes in B_{old} displaced by the project activity through this independent parameter. A survey or field test will be conducted to determine the amount of fuel-wood still used in the project activity by traditional stoves. Survey questionnaires administered to a sample of end users will elicit visual inspections of the household and if necessary an interview to confirm whether they are still using a baseline stove and in that case to obtain self-reported estimates of the amount of non-renewable biomass used per day in traditional stoves in parallel to the improved stove during various seasons. The quantity of woody biomass still used by traditional stoves (µold) will be excluded from B_{old}. Alternatively, field testing may measure fuel consumption by traditional stoves. A weighted average of stove sales for each vintage will be applied. This value will be used for ex-post emission reduction calculations.	Biennially

The data will be kept for 2 years following the end of the each crediting period. The method that shall be used to monitor the above mentioned parameters and the monitoring frequency have been given in the PoA-DD/1/

4.17.2 Management system and quality assurance

The programme consists of the distribution of improved cook stoves across Uganda. Up Energy will coordinate the small-scale programme of activities (SSC-PoA) and will support

the project operators in implementing the CDM programme activities (CPAs) in Uganda while acting as the focal point for all CDM related activities.

The list of operational and management activities and the organization responsible for fulfilling these responsibilities have been listed below:

Operational and management activities	**Record Name**	**Record Handling**	**Responsible**
Cross check of CPA monitoring report	PoA Distribution and Monitoring database	Electronic	CME
Cross check of CPA distribution reports	PoA Distribution and Monitoring database	Electronic	CME
Data processing and calculation	PoA Distribution and Monitoring database	Electronic	CME
Monitoring plan	CPA Monitoring record	Paper copy, transferred to electronic database	CME – collection and storing
Information from the DO	CPA Distribution Record	Paper copy, transferred to electronic database	CME – collection and storing
Information from the end user	CPA Distribution Record	Paper copy and transferred to electronic database	DO – collection CME – storing
Training – rules and requirements, data transfer, distribution and data collection	Training material (training agenda, list of participants, etc)	Hard copy	CME and DO

DNV confirms that PP has identified all the operational and management activities, including data transfer, record handling, storage and internal audit. The PP has identified the responsible parties for each activity.

1) The PP has a system in place to avoid double counting:
   a) To ensure that a CPA is not part of another existing PoA or is not a registered CDM project activity –
   b) Confirmation that the specific CPA within this program is not part of another registered PoA.

   Points a) and b) will be enforced through the CME and PoA logo clearly embedded on each ICS distributed. This will match with the information displayed on each CPA Distribution Record, with a copy retained by the customer, thus identifying that each stove with its PoA logo and unique serial ID number has been distributed under a PoA managed by the CME of this PoA.

c) Confirmation that every ICS within a specific CPA is not double counted across the PoA – All the ICS are marked by a company logo and a unique alpha numeric system imprinted (indicates name of the manufacturer, product model, type of product (i.e. main product vs accessories), manufacturing factory location and unique serial number). Additionally, carbon waivers will be delivered to end users with each individual ICS clearly stating that all carbon credits generated from the purchase and use of the ICS will be owned by the managing entity (CME) of the PoA. The sales database will be able to match each carbon waiver to the corresponding serial number. The PP will conduct internal audits to confirm that the carbon credits are claimed only once. The audits will be conducted using clustered random sampling (a subset of communities or regions chosen randomly from the sample population) to ensure representativeness.

2) The SSC-CPA included in the PoA is not a de-bundled component of another CDM programme activity (CPA) or CDM project activity – EB54, Annex 13 'Guidelines on assessment of de bundling for SSC project activities'/19/ states that 'If each of the independent subsystems/measures (e.g., biogas digester, solar home system) included in the CPA of a PoA is no larger than 1% of the small-scale thresholds defined by the methodology applied, then that CPA of PoA is exempted from performing de-bundling check i.e., considering as not being a de-bundled component of a large scale activity.' The ICS distributed under this PoA has energy savings < 1.8 GWh_{th}/year. Additionally, the PP has included an eligibility criteria (14) in Section B.2 of the PoA DD that only ICS with energy savings < 1.8 GWh_{th}/year can be included in this PoA.
3) The provisions to ensure that those operating the CPA are aware of and have agreed that their activity is being subscribed to the PoA – The CME is responsible for identifying, developing, registering and managing all SSC-CPAs. Legal binding contractual agreements signed by the DO and the CME will evidence the activities that the specific entities are responsible for and that they are aware of and have agreed that their activity is being subscribed to the PoA. Any parties the DO contracts in its role as the CPA developer will also be required to enter into a contractual agreement with the DO, similarly ascribing their activities to the PoA. Additionally, the PP has included an eligibility criteria (4) in Section B.2 of the PoA DD for this requirement.

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APPENDIX A

POA AND GENERIC CPA VALIDATION PROTOCOL

Table 1 Mandatory requirements for CDM programme of activities (PoA)

Requirement	Reference	Conclusion
About Parties		
1. The programme shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3.	Kyoto Protocol Art.12.2	OK
2. The programme shall assist non-Annex I Parties in contributing to the ultimate objective of the UNFCCC.	Kyoto Protocol Art.12.2.	OK
3. The programme shall have the written approval of voluntary participation from the designated national authority of each Party involved.	Kyoto Protocol Art. 12.5a, CDM Modalities and Procedures §40a	~~CAR 1~~ OK
4. The programme shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof.	Kyoto Protocol Art. 12.2, CDM Modalities and Procedures §40a	~~CAR 1~~ OK
5. In case public funding from Parties included in Annex I is used for the programme, these Parties shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of these Parties.	Decision 17/CP.7, CDM Modalities and Procedures Appendix B, § 2	OK
6. Parties participating in the CDM shall designate a national authority for the CDM.	CDM Modalities and Procedures §29	OK
7. The host Party and the participating Annex I Party shall be a Party to the Kyoto Protocol.	CDM Modalities §30/31a	OK
8. The participating Annex I Party's assigned amount shall have been calculated and recorded.	CDM Modalities and Procedures §31b	OK
9. The participating Annex I Party shall have in place a national system for estimating GHG emissions and a national registry in accordance with Kyoto Protocol Article 5 and 7.	CDM Modalities and Procedures §31b	OK
About Design of Programme		

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

Requirement	Reference	Conclusion
CDM project activities set out in § 6 (c) of the Marrakech Accords and shall not be a debundled component of a larger project activity.	for Small Scale CDM Project Activities §12a,c	
18. The proposed project activity shall confirm to one of the project categories defined for small scale CDM project activities and use the simplified baseline and monitoring methodology for that project category.	Simplified Modalities and Procedures for Small Scale CDM Project Activities §22e	OK
19. If required by the host country, an analysis of the environmental impacts of the project activity is carried out and documented.	Simplified Modalities and Procedures for Small Scale CDM Project Activities §22c	OK
About additionality		
20. Additionality of the programme as a whole is demonstrated because in the absence of the CDM (i) the proposed voluntary measure would not be implemented, or (ii) the mandatory policy/regulation would be systematically not enforced and that non-compliance with those requirements is widespread in the country/region, or (iii) that the PoA will lead to a greater level of enforcement of the existing mandatory policy /regulation.	Kyoto Protocol Art. 12.5c, CDM Modalities and Procedures §43 PoA Procedures § 6 (e)	OK
21. It is demonstrated for the PoA and generic CPA that in the absence of CDM, none of the implemented CPAs would occur	PoA Standard § 7	OK
22. Additionality of a typical CPA is demonstrated through eligibility criteria for inclusion in the PoA.	PoA Procedures § 7 (g)	OK
About application of baseline and monitoring methodology		
23. The baseline and monitoring methodology shall be previously approved by the CDM Executive Board.	CDM Modalities and Procedures §37e	OK
24. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances.	CDM Modalities and Procedures §45c,d	OK
25. The baseline methodology shall exclude to earn CERs for decreases in activity	CDM Modalities and Procedures §47	OK

Requirement	Reference	Conclusion
levels outside the project activity or due to force majeure.		
26. The monitoring plan for a typical CPA is developed in accordance with the approved monitoring methodology, and identification of the monitoring provisions and data parameters a CPA has is to apply/monitor	PoA Procedures § 6 (j)	OK
27. Provisions for monitoring, verification and reporting shall be in accordance with the modalities described in the Marrakech Accords and relevant decisions of the COP/MOP.	CDM Modalities and Procedures §37f	OK
About forecast emission reductions		
28. The emission reductions shall be real, measurable and give long-term benefits related to the mitigation of climate change.	Kyoto Protocol Art. 12.5b	OK
About environmental impacts		
29. Documentation on the analysis of the environmental impacts of the programme activity, including transboundary impacts, shall be submitted, and, if those impacts are considered significant by the programme participants or the Host Party, an environmental impact assessment in accordance with procedures as required by the Host Party shall be carried out.	CDM Modalities and Procedures §37c	☒ Analysis at PoA level ☐ Analysis at CPA level
About stakeholder comments		
30. Comments by local stakeholders shall be invited, a summary of these provided and how due account was taken of any comments received.	CDM Modalities and Procedures §37b	☒ Analysis at PoA level ☐ Analysis at CPA level
31. Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for minimum 30 days, and the project design document and comments have been made publicly available.	CDM Modalities and Procedures §40	OK
Other		

Requirement	Reference	Conclusion
32. The project design document shall be in conformance with the CDM-PoA-DD format.	CDM Modalities and Procedures Appendix B, EB Decision	OK

Table 2 Requirements checklist

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
PART I. Programme of activities (PoA)					
A General description of project activity					
A.1 Title of the PoA (PS § 31, VVS § 62-63)					
A.1.1 Does section A.1 of the PoA-DD include a clearly identifiable project title, version number of the PoA-DD and date of the PoA-DD?	/1/	DR	☒ Clearly identifiable title of the project activity ☒ Version number of the PDD is included ☒ Date of the PDD is included.		OK
A.1.2 Is the PoA-DD is in accordance with the applicable requirements for completing PoA-DD?	/1/	DR	☒ Yes *If no, list where the PDD is not in accordance:*		OK
A.2 Description of the PoA (VVS § 64-69, (PS § 138, VVS § 189 and VVS § 150-157 for small-scale project activities, as applicable)					
A.2.1 How was the design of the PoA assessed?	/1/	DR	*What type is the generic CPA?* ☐ Generic CPA in existing facility or utilizing existing equipment(s) ☐ Generic CPA is either a large scale project or a small scale project with emission reductions exceeding 15 000 tCO_2e per year. In this case, a site visit must be performed. ☐ Generic CPA is a bundled small scale project, with each project in the bundle		OK

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			with emission reductions not exceeding 15,000 tCO_2e per year. In such case the number of physical site visits may be based on sampling, if the sampling size is appropriately justified through statistical analysis. ☐ The generic CPA is an individual small scale project activity with emission reductions not exceeding 15 000 tCO_2e per year. In this case, DOE may not conduct a physical site visit as appropriate. ☒ Greenfield project *How was the design of the first CPA submitted with the PoA assessed?* ☒ Physical site inspection ☐ Reviewing available designs and feasibility studies *If a physical site inspection is not undertaken, justify why no site visit was undertaken:*		
A.2.2 If a greenfield project, describe the physical implementation of the project when the validation was commenced.	/1/	DR	At the time of validation the CME had not yet started the distribution of the improved cook stoves. The validation included a site visit to assess the baseline scenario i.e. the current use of inefficient cook stoves.		OK
A.2.3 If physical site visits were performed based on sampling (only applicable for bundled small scale projects,	/1/	DR	DNV visited 25 households in Kampala (Urban) and 25 Households in rural		OK

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
each with emission reductions not exceeding 15 000 tCO2e per year), justify the sampling through a statistical analysis:			(Mityana and Bujuko). A total of 50 households were sampled.		
A.2.4 Does the PoA-DD and generic CPA-DD describe the framework for the implementation of the proposed CDM PoA and inclusion of CPAs under the PoA?	/1/	DR	The PoA DD and the generic CPA-DD describes the framework for the implementation of the proposed CDM PoA and inclusion of CPAs under the PoA		OK
A.2.5 Does the PoA involve alteration of existing installations? If so, have the differences between pre-project and post-project activity been clearly described in the PoA-DD?	/1/	DR	The PoA does not involve alteration of existing installations.		OK
A.2.6 Does the PoA design engineering reflect current good practices?	/1/	DR	The PoA proposes to replace inefficient conventional firewood stoves mainly three stone cook stoves. The first CPA will use the higher efficiency Ezy stove to non-institutional users. The Ezy Stove stove model is marketed by Paradigm and has been successfully distributed in the country of Kenya. This model contains a cylindrical combustion chamber made of metal. The outer body is made up of a metal. It's small and portable, enabling it to be easily transported. The materials are from readily available local materials requiring limited tools and training to manufacture. The stove is assembled locally in Uganda.		OK

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			DNV considers this ICS reflects current good practices.		
A.2.7 Would the technology result in a significantly better performance than any commonly used technologies in the host country? Is any transfer of technology from any Annex-I Party involved?	/1/	DR	The technology being implemented in the first CPA is significantly better than the current cook stove technologies being used in Uganda.		OK
A.2.8 Does the PoA qualify as a small scale CDM project activity as defined in paragraph 6(c) of decision 17/CP.7 on the modalities and procedures for the CDM?	/1/	DR	The PoA falls under the project Type (ii) energy efficiency improvement project activities which reduce energy consumption, on the supply and/or demand side, by up to the equivalent of 60 gigawatt hours per year (which translates to thermal energy savings of 180 GWh_{th} per year)(F-CDM-SSCwg ver 01 SSC_233). The PoA has an inclusion criterion for CPAs (No. 14) to ensure that all CPAs are only small scale project activities.		OK
A.2.9 Is the small scale project activity a debundled component of a larger project activity in accordance with the rules defined in appendix C of the simplified modalities and procedures for small-scale CDM project activities?	/1/	DR	The PoA is not debundled component of a larger project activity as the project participant has not registered any CDM project or PoA in Uganda.		OK
A.3 Programme Boundaries (VVS § 191-192) **Programme Boundaries are the limits and borders defining the GHG emission reduction project.**					
A.3.1 Are the programme's spatial boundaries (geographical) clearly defined?	/1/	DR	The geographical boundary of the PoA has not been defined in Section A.4.1.2 of the PoA DD.	~~CAR 2~~	OK

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
A.3.2 Are the programme's system boundaries (components and facilities used to mitigate GHGs) clearly defined?	/1/	DR	The CME proposes to disseminate improved cooking stoves (ICS) in Uganda. These improved cook stoves will replace the prevailing inefficient traditional stoves or equivalent with stoves which combust wood more efficiently. The project aims to reduce the emissions from the combustion of non-renewable biomass. The programme's system boundary included the improved cook stoves and the non-renewable biomass used as fuel.		OK
A.3.3 Do the programme boundaries take into consideration all applicable national and/or sectoral policies and regulations within the chosen boundary?	/1/	DR	The project boundary and the CPA boundary is the country of the Uganda. The CME has taken into consideration all the sectoral policies and regulations within the chosen boundary		OK
A.3.4 Can each CPA under the PoA be clearly identified individually including spatial boundaries (geographical) clearly defined?	/1/	DR	There is currently one registered GS VER improved cook stove project and one GS VER improved cook stove project in validation stage. The project proponent has not documented in the PoA-DD and CPA-DD, the monitoring process for tracking the ICS to the specific CDM PoA and CPA.	~~CAR 16~~	OK

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
A.4 Participation and authorization (VVS § 38-52) Referring to Part A.3 and A.4, Appendix 1 and 2 of the PoA-DD as well as the CDM glossary with respect to the terms Party, Letter of Approval, Authorization and Project Participant.					
A.4.1 Do all participating Parties fulfil the participation requirements as follows:	/1/	DR	The LoA from Uganda has not been submitted to DNV	~~CAR 1~~	OK
A.4.2 Do the letters of approval meet the following requirements?	/1/	DR	The LoA from Uganda has not been submitted to DNV	~~CAR 1~~	OK
A.4.3 Have all private/public project participants been authorized by an involved Party?	/1/	DR	The LoA from Uganda has not been submitted to DNV	~~CAR 1~~	OK
A.4.4 Has the coordinating/managing entity of the programme been identified?	/1/	DR	The co-ordinating entity is UpEnergy Group		OK
A.4.5 Has the coordinating/managing entity provided letters of authorization of its coordination of the PoA from each host Party?	/1/	DR	The LoA from Uganda has not been submitted to DNV	~~CAR 1~~	OK
A.5 Modalities of communications (VVS § 53-61)					
A.5.1 How has the corporate identity of all project participants and focal points included in the MoC, as well as the personal identities, including specimen signatures and employment status, of their authorized signatories, been validated?	/1/	DR	☐ Directly checking evidence for corporate, personal identity and other relevant documentation; ☐ Notarized documentation; ☒ Written confirmation from the project participant or the coordinating/managing entity that submits to it the MoC statement that all		OK

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			corporate and personal details, including specimen signatures, are valid and accurate. If this case was selected, DNV has confirmed that: ☒ the MoC statement was received from a project participant with whom DNV has a contractual relationship. ☐ the official who submits the MoC statement to the DOE and the official who signed the written confirmation (if a different person) is/are duly authorized to do so on behalf of the respective project participant		
A.5.2 Has the MoC statement been correctly completed and duly authorized? Check that all three requirements listed in the next column are complied with.	/13/	DR	☒ The latest version of the form F-CDM-MOC has been used; ☒ The information required as per the F-CDM-MOC, including its annex 1, is correctly completed; ☒ The project participant is authorized signatories signing the F-CDM-MOC correspond to the project participant is authorized signatories included in F-CDM-MOC, annex 1.		OK

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
A.6 Public funding of the project activity (CDM Modalities and Procedures Appendix B § 2)					
A.6.1 In case public funding from Parties included in Annex I is used for the project activity, have these Parties provided an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of these Parties?	/1/	DR	No public funding is involved, and the validation did not reveal any information that indicates that the programme can be seen as a diversion of ODA funding towards Uganda.		OK
A.7 Verification of CPAs (PoA procedure § 6 k)					
A.7.1 If case the coordinating /managing entity does not wish to have all CPAs verified, is there a description of the proposed statistically sound sampling method/procedure to be used by DOEs for verification of the amount of reductions of anthropogenic emissions by sources or removals by sinks of greenhouse gases achieved by CPAs under the PoA?	/1/	DR	The CME will have all CPAs verified.		OK
B Demonstration of additionality and development of eligibility criteria					
B.1 Additionality of the Programme of Activities (VVS § 195) **Assessment of the additionality of the PoA as a whole in accordance with the PoA standard**					
B.1.1 Has it been demonstrated that the programme is a voluntary coordinated action that would not be implemented in the absence of CDM?	/1/	DR	The additionality demonstration for the PoA is not satisfactory. The CME shall provide more detailed and referenced explanation on the assessment and demonstration of additionality for the PoA.	~~CAR 12~~ ~~CAR 14~~ ~~CAR 15~~	OK

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
B.1.2 If the programme is implementing a mandatory policy/regulation, has it been demonstrated whether the policy/regulation is being enforced? If it is enforced, has it been demonstrated that the programme will lead to a higher level of enforcement?	/1/	DR	The CME has demonstrated that there are no regulation or policy that require the implementation of improved cook stoves in Uganda		OK
B.2 Additionality determination of each generic CPA (VVS § 101-129 and VVS § 158-161 for small-scale project activities, as applicable)					
B.3 What approach/tool does the PoA use to demonstrate additionality of each generic CPA? Is this in line with the methodology? In case of small-scale CDM project activities, are the Guidelines on the demonstration of additionality of small-scale project activities applied considering also the "Non-binding best practice examples to demonstrate additionality for SSC project activities".	/1/	DR	The CME has not described the approach for demonstrating additionality of a CPA	~~CAR 12~~ ~~CAR 14~~ ~~CAR 15~~	OK
B.3.1 Have the regulatory requirements correctly been taken into account to evaluate the project activity and the alternatives?	/1/	DR	The CME has demonstrated that there are no regulation or policy that require the implementation of improved cook stoves in Uganda		OK
B.3.2 Is sufficient evidence provided to support the relevance of the arguments made?	/1/	DR	The additionality demonstration in Section A.4.3 does not satisfactorily demonstrate additionality for this PoA. The PoA DD, version 1, Section A.4.3 states "Publicly available data states that the penetration rate of ICS in Uganda is only 5% , and thus a realistic and credible barrier due to "prevailing practice" can be claimed." The barrier faced due to the prevailing practice has not been described. The 5% market	~~CAR 13~~	OK

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			penetration references data from 2007, this information is outdated. A combined market penetration rate has been given for improved charcoal stoves and improved wood fuel stoves. This might not be representative for both types of improves stoves. The PP has not demonstrated additionality using the guidance provided by CDM-EB for PoA's		
B.3.3 What is the additionality of each generic CPA mainly based on (Investment analysis or barrier analysis)?	/1/	DR	The additionality demonstration in Section A.4.3 does not satisfactorily demonstrate additionality for this PoA. The PoA DD, version 1, Section A.4.3 states "Publicly available data states that the penetration rate of ICS in Uganda is only 5% , and thus a realistic and credible barrier due to "prevailing practice" can be claimed." The barrier faced due to the prevailing practice has not been described. The 5% market penetration references data from 2007, this information is outdated. A combined market penetration rate has been given for improved charcoal stoves and improved wood fuel stoves. This might not be representative for both types of improves stoves. The PP has not demonstrated additionality using the guidance provided by CDM-EB for PoA's	~~CAR 14~~	OK

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
Investment analysis (VVS § 117-123) *The list of questions below must be adjusted to the parameters in the investment analysis relevant to the project under validation. <u>All</u> input parameters need to be assessed.*					NA
Barrier analysis (VVS § 124-127)					NA
Common practice analysis (VVS § 128-130)					NA
Conclusion					
B.3.4 What is the conclusion with regard to the additionality of the project activity?		DR	EB 68, Annex 27 "Guidelines on the demonstration of additionality of small-scale project activities" has been correctly applied to demonstrate the project will not be implemented in the absence of CDM revenue. All the assumption and data used by the project participants are listed in the PoA-SSC-DD and/or supporting documents. All documentation relevant for demonstrating additionality have been correctly quoted and interpreted in the PoA-SSC-DD.	~~CAR 12~~ ~~CAR 13~~ ~~CAR 14~~ ~~CAR 15~~	OK

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
B.4 Eligibility Criteria (VVS § 196) **Eligibility criteria to assess eligibility of CPAs to be included to PoA.**					
B.4.1 Are the geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA?	/1/	DR	The CDM-EB requires the GPS co-ordinates to be provided for the PoA DD and each CPA DD. The GPS co-ordinates has not been provided in the CPA-DD for CPA boundary.	~~CAR 2~~	OK
B.4.2 Are there conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo)?	/1/	DR	There is currently one registered GS VER improved cook stove project and one GS VER improved cook stove project in validation stage. The project proponent has not documented in the PoA-DD and CPA-DD, the monitoring process for tracking the ICS to the specific CDM PoA and CPA. DNV is not clear how the project proponent can demonstrate that the cook stoves are not part of another project activity (CDM PoA or GS). Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo) are not present	~~CAR 16~~ ~~CAR 17~~	OK
B.4.3 Are there specifications of technology/measure including the level and type of service, performance specifications including compliance with	/1/	DR	The CPA eligibility criteria is not in lines with the requirements of Demonstration of additionality, development of eligibility	~~CAR 4~~	OK

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
testing/certifications?			criteria and application of multiple methodologies for programme of activities		
B.4.4 Are there conditions to check the start date of the CPA through documentary evidence?	/1/	DR	The CPA eligibility criteria is not in lines with the requirements of Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities	~~CAR 4~~	OK
B.4.5 Are there conditions that ensure compliance with applicability and other requirements of single or multiple methodology/ies applied by CPAs?	/1/	DR	The CPA eligibility criteria is not in lines with the requirements of Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities	~~CAR 4~~	OK
B.4.6 Are there conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality, and are these in accordance with the requirements of the PoA Standard?	/1/	DR	The CPA eligibility criteria is not in lines with the requirements of Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities	~~CAR 4~~	OK
B.4.7 Are there PoA-specific requirements stipulated by the CMEs including any conditions related to undertaking local stakeholder consultations and environmental impact analysis?	/1/	DR	The CPA eligibility criteria is not in lines with the requirements of Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities	~~CAR 4~~	OK
B.4.8 Where applicable, are the target group (e.g. domestic/commercial/industrial, rural/urban, grid-connected/off-grid) and distribution mechanisms (e.g. direct installation) specified?	/1/	DR	The CPA eligibility criteria is not in lines with the requirements of Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities	~~CAR 4~~	OK

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
B.4.9 Where applicable, are there conditions related to sampling requirements for a PoA in accordance with the approved guidelines/standard from the Board pertaining to sampling and surveys?	/1/	DR	The CPA eligibility criteria is not in lines with the requirements of Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities	~~CAR 4~~	OK
B.4.10Where applicable, are there conditions that ensure that CPA in aggregate meets the small-scale or micro-scale threshold criteria and remain within those thresholds throughout the crediting period of the CPA?	/1/	DR	The CPA eligibility criteria is not in lines with the requirements of Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities	~~CAR 4~~	OK
B.4.11Where applicable, are there requirements for the debundling check, in case CPAs belong to small-scale (SSC) or microscale project categories?	/1/	DR	The CPA eligibility criteria is not in lines with the requirements of Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities Eligibility Criteria Applicability of the Methodology AMS-II.G, version 5 - The aggregate energy savings of a single project activity shall not exceed the equivalent of 60 GWh per year or 180 GWh thermal per year in fuel input. The PoA DD and CPA-DD does not list the above requirement as the applicability criteria for AMS-II.G, version 5.	~~CAR 4~~ ~~CAR 5~~	OK
B.4.12Are there conditions to provide an affirmation that	/1/	DR	The CPA eligibility criteria is not in lines	~~CAR 4~~	OK

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
funding from Annex I parties, if any, does not result in a diversion of official development assistance?			with the requirements of Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities		
B.4.13Are all eligibility criteria verifiable, and sufficiently objective and comprehensive to permit the assessment of the inclusion of CPAs in the PoA?	/1/	DR	The above corrective action requests need to be addressed first.	~~CAR 4~~	OK
B.5 Application of methodologies by the PoA (VVS §190)					
B.5.1 Does the PoA apply approved methodologies and the correct and valid version thereof? If during the course of validation the originally applied version of the methodology expires, a CAR shall be raised in Table 3 of the validation protocol. Any new requirements of the revised version of the methodology not yet validated in Table 2 of the validation protocol shall be validated in Table 3 as part of the assessment of the CAR raised.	/1/	DR	The methodology used for this project activity is AMS II.G, version 3 "Energy efficiency measures in thermal applications of non-renewable biomass".		OK
B.5.2 If the programme applies multiple methodologies, is their application in accordance with the PoA Standard?	/1/	DR	The PoA applies one methodology.		OK
B.5.3 If the PoA applies small-scale methodologies, does the PoA also comply with the general guidelines to SSC CDM methodologies, which provides guidelines on equipment capacity, equipment performance/lifetime, baseline identification for type-II/III Greenfield project activities, sampling and other monitoring-related issues?	/1/	DR	**Applicability** The applicability criteria for AMS II.G, version3 states "The project participants are able to show that non-renewable biomass has been used since 31 Dec 1989, using survey methods or referring to published literature, official reports or statistics."	~~CAR 3~~	OK

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			Section E.2 of the PoA DD states "Uganda suffers remarkable deforestation at least since the beginning of the 21st century as reported by FOSA". The project proponent needs to demonstrate that the deforestation was since 31 December 1989.		
B.6 Management system of the PoA (VVS § 186) Assessment of the PoA management systems in accordance with the PoA standard					
B.6.1 Is there a clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies?	/1/	DR	Standard, "Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of Activities" 19. The CME shall have the competencies to check the features of potential CPAs and ensure that each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA. The CME shall develop and implement a management system that includes the following made available to the DOE at the time of validation of the PoA: a) A clear definition of roles and	~~CAR 19~~	OK

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies; b) Records of arrangements for training and capacity development for personnel; c) A procedure for technical review of inclusion of CPAs; d) Records and documentation control process for each CPA under the PoA; e) Measures for continuous improvements of the PoA management system The PoA DD, version 2, does not demonstrate the above requirements.		
B.6.2 Are there records of arrangements for training and capacity development for personnel?	/1/	DR	Suitable training will be conducted for partners taking part in the project activity to make them aware of the rules of the CDM and the PoA and their requirements in terms of distribution and data collection. The project activity will provide to end-users after-distribution servicing and support of the technology by means of the Dos.		OK
B.6.3 Are there procedures for technical review of inclusion of CPAs?	/1/	DR	Standard, "Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of Activities" 19. The CME shall have the competencies to	~~CAR 19~~	OK

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			check the features of potential CPAs and ensure that each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA. The CME shall develop and implement a management system that includes the following made available to the DOE at the time of validation of the PoA: f) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies; g) Records of arrangements for training and capacity development for personnel; h) A procedure for technical review of inclusion of CPAs; i) Records and documentation control process for each CPA under the PoA; j) Measures for continuous improvements of the PoA management system The PoA DD, version 2, does not demonstrate the above requirements.		
B.6.4 Is there a procedure to avoid double counting (e.g. to avoid the case of including a new CPA that has already been registered either as a CDM project activity or as a CPA of another PoA)?	/1/	DR	There is currently one registered GS VER improved cook stove project and one GS VER improved cook stove project in validation stage. The project proponent has not documented in the PoA-DD and CPA-DD, the	~~CAR 16~~	OK

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			monitoring process for tracking the ICS to the specific CDM PoA and CPA.		
B.6.5 Is there a records and documentation control process for each CPA under the PoA?	/1/	DR	Standard, "Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of Activities" 19. The CME shall have the competencies to check the features of potential CPAs and ensure that each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA. The CME shall develop and implement a management system that includes the following made available to the DOE at the time of validation of the PoA: k) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies; l) Records of arrangements for training and capacity development for personnel; m) A procedure for technical review of inclusion of CPAs; n) Records and documentation control process for each CPA under the PoA; o) Measures for continuous improvements of the PoA management system	~~CAR 19~~	OK

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Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			The PoA DD, version 2, does not demonstrate the above requirements.		
B.6.6 Are there measures for continuous improvements of the PoA management system?	/1/	DR	Standard, "Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of Activities" 19. The CME shall have the competencies to check the features of potential CPAs and ensure that each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA. The CME shall develop and implement a management system that includes the following made available to the DOE at the time of validation of the PoA: p) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies; q) Records of arrangements for training and capacity development for personnel; r) A procedure for technical review of inclusion of CPAs; s) Records and documentation control process for each CPA under the PoA; t) Measures for continuous improvements of the PoA management system	~~CAR 19~~	OK

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			The PoA DD, version 2, does not demonstrate the above requirements.		
B.6.7 Do the operational and management arrangements established by the coordinating entity include provisions to ensure that CPA implementers are aware and have agreed that their activity is being subscribed to the PoA?	/1/	DR	The project proponent needs to submit all contracts with manufacturers, distributors, retailers, etc to ensure that carbon rights have been passed to the project proponent.	~~CAR 18~~	OK
C Duration of the PoA, Crediting Period (VVS § 197)					
C.1.1 Is the PoA starting date and length of the PoA clearly defined and evidenced? Is the start date of a PoA either (a) the date of notification of the intention to seek the CDM status by the coordinating/managing entity to the secretariat and the DNA; or (b) the date of publication of the PoA-DD for global stakeholder consultation?	/1/	DR	The PoA starting date is the date of publication of the PoA-DD for global stakeholder consultation i.e. 02/08/2011.		OK
C.1.2 Does the PoA design documentation confirm that the length of the PoA does not exceed 28 years (60 years for A/R)?	/1/	DR	The PoA DD confirms that the length of the PoA will not be greater than 28 years. The CPA eligibility criteria		OK
D Environmental Impacts (VVS § 134-137, VVS § 199-200)			☒ Analysis at PoA level ☐ Analysis at CPA level This section must only be completed if the analysis of environmental impacts is at PoA level.		
D.1.1 Are there any host country requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved? Does the approval contain any conditions that need monitoring? For small-scale project activities, is an assessment of the environmental impacts of the proposed	/1/	DR	The proposed project is not required to undertake an environmental impact assessment according to the Uganda regulation.		OK

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
CDM project activity is required by the host Party?					
D.1.2 Does the PoA comply with environmental legislation in the host country?	/1/	DR	The PoA complies with the environmental regulation in Uganda		OK
D.1.3 Will the PoA create any adverse environmental effects?	/1/	DR	The programme will not create any negative environmental effects.		OK
D.1.4 Have identified environmental impacts been addressed in the PoA design?	/1/	DR	EIA has not been conducted for this project activity, as it is not a requirement from the Host country for this type of project activity.		OK
E Local stakeholder consultation (VVS § 138-140, VVS § 201-202)			☒ Consultation at PoA level ☐ Consultation at CPA level This section must only be completed if the analysis of environmental impacts is at PoA level.		
E.1.1 Have relevant stakeholders been consulted?	/1/	DR	Two local stakeholder consultations were held, one on 17 May 2011 the second on 31 May 2011 in Kampala		OK
E.1.2 Have appropriate media been used to invite comments by local stakeholders?	/1/	DR	The CME has used appropriate media to invite comments.		OK
E.1.3 If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	/1/	DR	The stakeholder consultation process is not required by the Government of Uganda		OK
E.1.4 Is a summary of the stakeholder comments received provided?	/1/	DR	During the site visit, DNV visited the community center where the stakeholder consultation was carried out. DNV observed that the information about the project was	~~CL 3~~	OK

Checklist Question	Ref	MoV	Assessment by DNV	Draft Concl.	Final Concl.
			provided to the locals. However, this information was very technical and in detail. The information was given in English. The sub-county chief has to explain about the project to the locals every time they need to know about the project. A short summary of the project should be made available in the local language		
E.1.5 Has due account been taken of any stakeholder comments received?	/1/	DR	The CME has addressed stakeholder comments received during the local stakeholder consultation period.		OK

PART II. Generic component project activity (CPA)					
A Description of each generic CPA (VVS § 189)					
A.1.1 Does the description of each generic CPA sufficiently cover all relevant elements, is accurate and does it provides the reader with a clear understanding of the nature of the proposed CPAs?	/1/	DR	The generic CPA sufficiently covers all the relevant elements of the CPA.		OK
A.1.2 If applicable, are all different types of generic CPAs clearly described?	/1/	DR	There is only one type of Generic CPA for this PoA		OK
B Application of a baseline and monitoring methodology(ies)					
B.1 Title and reference of the approved baseline and monitoring methodology(ies) selected					
B.1.1 Are the exact reference and title of approved methodology(ies) and tools listed?	/1/	DR	This PoA applies the methodology: AMS-II.G. Energy Efficiency Measures in Thermal Applications of Non-Renewable Biomass Version 05, Sectoral Scope 03.		OK
B.1.2 Are valid version of approved methodology(ies) and tools applied?	/1/	DR	This POA applies the methodology: AMS-II.G. Energy Efficiency Measures in Thermal Applications of Non-Renewable Biomass Version 05, Sectoral Scope 03.		OK

B.2 Applicability of methodology (and tools) (VVS § 73-77) **Insert a row for each applicability criteria of the applied methodology (and tools)**					
B.2.1 How was it validated that each specific CPA complies with the applicability criteria:	/1/	DR	The CPA eligibility criteria is not in lines with the requirements of Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities Eligibility Criteria Applicability of the Methodology AMS-II.G, version 5 - The aggregate energy savings of a single project activity shall not exceed the equivalent of 60 GWh per year or 180 GWh thermal per year in fuel input. The PoA DD and CPA-DD does not list the above requirement as the applicability criteria for AMS-II.G, version 5.	~~CAR 4~~ ~~CAR 5~~	OK
B.3 Project boundary of each generic CPA (VVS § 82-87)					
B.3.1 What are each generic CPA's system boundaries (components and facilities used to mitigate GHGs)? Are they clearly defined and in accordance with the methodology?	/1/	DR	The CDM-EB requires the GPS co-ordinates to be provided for the PoA DD and each CPA DD. The GPS co-ordinates has not been provided in the CPA-DD for CPA boundary.	~~CAR 2~~	OK
B.3.2 Which GHG sources are identified for the CPA? Does the identified boundary cover all possible sources linked to the project activity? Give reference to documents considered to arrive at this conclusion.	/1/	DR	CO_2 emissions from the combustion of non-renewable biomass for cooking have been identified as the source for baseline and project emissions.		OK

B.3.3 Do the system boundaries for the CPA as described in the CPA-DD fully comply with the system boundaries stipulated by the applied baseline methodology?	/1/	DR	The programme system boundary is the country of Uganda where the efficient systems using biomass will be distributed as part of this PoA.		OK
B.3.4 Does the project involve other emissions sources not foreseen by the methodologies that may question the applicability of the methodology? Do these sources contribute with more than 1% of the estimated emission reductions of the project?	/17/. /1/	DR	The identified boundary and selected sources and gases are justified for the project activity. The validation of the project activity did not reveal other greenhouse gas emissions occurring within the proposed CDM project activity boundary as a result of the implementation of the proposed project activity which is expected to contribute more than 1% of the overall expected average annual emission reduction, which is not addressed by the methodology AMS-II.G, version 05		OK
B.4 Baseline scenario determination and description (VVS § 88-95 / Identification of alternatives to the project activity (VVS § 113-116) *Ensure that the evaluation of all alternatives provided and required by the methodology and also possible alternatives/offshoots of alternatives are discussed. If baseline alternatives required to be considered by the methodology are considered not applicable, please assess the justification for this.*					
B.4.1 Which baseline scenarios have been identified? Is the list of baseline scenarios complete? Does the list include as one of the options that the project activity is undertaken without being registered as a proposed project activity? Does the list contains all plausible alternatives which are viable means of supplying the comparable outputs or services that are to be supplied by the proposed project activity?	/17/ /1/	DR	The baseline scenario has been identified in accordance with AMS-II.G, version 3. *Now updated to AMS-II.G, version 5* In accordance with the methodology AMS-II.G, version 5, the baseline scenario is the use of fossil fuels for meeting similar thermal		OK

			energy needs.		
B.4.2 Could the project activity in absence of the CDM or other baseline alternatives also be implemented by other entities than the CDM project participants? If so, has this also been included in the list of baseline scenarios?	/1/	DR	NA The baseline scenario has been chosen in accordance with AMS-II.G, version 5. As per the methodology it is assumed that in the absence of the project activity, the baseline scenario is the use of fossil fuels for meeting similar thermal energy needs.		OK
B.4.3 How have the other baseline scenarios been eliminated in order to determine the baseline?	/1/	DR	NA The baseline scenario has been chosen in accordance with AMS-II.G, version 5. As per the methodology it is assumed that in the absence of the project activity, the baseline scenario is the use of fossil fuels for meeting similar thermal energy needs.		OK
B.4.4 What is the baseline scenario?	/1/	DR	The baseline scenario has been chosen in accordance with AMS-II.G, version 5. As per the methodology it is assumed that in the absence of the project activity, the baseline scenario is the use of fossil fuels for meeting similar thermal energy needs.		OK
B.4.5 Is the determination of the baseline scenario in accordance with the guidance in the methodology?	/1/	DR	The baseline scenario has been chosen in accordance with AMS-II.G, version 5. As per the methodology it is assumed that in the absence of the project activity, the baseline scenario is the use of fossil fuels for meeting similar thermal energy needs.		OK
B.4.6 Has the baseline scenario been determined using conservative assumptions where possible?	/1/	DR	The baseline scenario has been chosen in accordance with AMS-II.G, version 5. As per the methodology it is assumed that in the absence of the project activity, the baseline scenario is the use of fossil fuels for meeting similar thermal energy needs.		OK
B.4.7 Does the baseline scenario sufficiently take into	/1/	DR	NA		OK

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account relevant national and/or sectoral policies? Does the baseline scenario comply with all applicable and enforced legislation?			The baseline scenario has been chosen in accordance with AMS-II.G, version 5. As per the methodology it is assumed that in the absence of the project activity, the baseline scenario is the use of fossil fuels for meeting similar thermal energy needs.		
B.4.8 Is the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced?	/1/	DR	NA The baseline scenario has been chosen in accordance with AMS-II.G, version 5. As per the methodology it is assumed that in the absence of the project activity, the baseline scenario is the use of fossil fuels for meeting similar thermal energy needs.		OK
B.4.9 Is the baseline determination adequately documented in the PoA-DD? • All assumptions and data used by the project participants are listed in the PoA-DD and related document to be submitted for registration. The data are properly referenced. • All documentation is relevant as well as correctly quoted and interpreted. • Assumptions and data can be deemed reasonable • Relevant national and/or sectoral policies and circumstances are considered and listed in the PoA-DD. • The methodology has been correctly applied to identify what would occurred in the absence of the proposed CDM project activity	/1/	DR	The methodology AMS II.G, version 3, specifies that the default can be used only for 3 stone cook stove, or conventional system with out improved combustion air supply, flue gas ventilation (grate or chimney); for other types of systems a default value of 0.2 may be optionally used. During the site visit, DNV observed that there were several varieties of traditional and locally manufactured cook stoves. The PDD states that for the estimation of $B_{y,savings,}$ η_{old} (Efficiency of the system being replaced) will use a default factor of 0.1. The project proponent should demonstrate that the default factor of 0.1 is used for three stone fire, or a conventional system with no improved combustion air supply or flue	~~CAR 9~~ CL 1	OK

			gas ventilation system, i.e. without a grate or a chimney		
B.5 Demonstration of eligibility for each generic CPA					
B.5.1 Has it been sufficiently justified that the CPA complies with Eligibility criteria 1 - The CPA is located within Uganda. Please note that not all ICS installations may have been deployed at the CPA inclusion stage, however the location of the ICS can also be checked during verification. In the event that any deployed ICS is found to be outside of the project boundary/location, those ICS will not be counted in the emission reduction calculation.	/2/	DR	The physical boundary of the SSC-CPA is determined by the location of installed ICS. This SSC-CPA's geographic boundary is the national borders of Uganda, which is within the boundary of the POA.		OK
B.5.2 Has it been sufficiently justified that the CPA complies with Eligibility criteria 2 - A unique numbering or identification system for the ICS installed is applied. This shall ensure no double counting of stoves within the PoA and ensure that stoves can be identified as belonging to this PoA and not to a PoA managed by any other CME. Please note that not all ICS installations may have been deployed at the CPA inclusion stage, however the ICS' unique numbering can also be checked during verification. In the event that any deployed ICS is found not to be in line with CPA double counting criteria, those ICS will not be counted in the emission reduction calculation.	/2/	DR	The PoA DD and CPA DD has described a unique number and identification system for the ICS. This includes a PoA logo on the every ICS that is a part of this PoA. An example of the stove ID serial number to be used is shown in the CPA-DD, section A.5. The actual serial numbers displayed on the stove itself will be available at the CPA verification. ICS Sales Receipts in Total Sales Record including CPA assignment and end user details (i.e. name, address) will also be provided. The ICS and sales receipt will be verified at the verification stage		OK
B.5.3 Has it been sufficiently justified that the CPA complies with Eligibility criteria 3 - The CPA is exclusively bound to the PoA. The CPA shall not be proposed as an individual CDM project and/or as a part of any other CDM PoA and/or any other mechanism to avail climate change mitigation benefits. A statement shall be included in the CPA-DD that the specific CPA will not be part of another single CDM project activity or CPA under another PoA and	/2/	DR	Currently there are no other CDM cook stove projects in Uganda, thus confirming that this CPA has not been and will not be registered either as a single CDM project activity or as a CPA under another PoA.		OK

	confirmed by the Partner Organization (PO) implementing the CPA.					
	B.5.4 Has it been sufficiently justified that the CPA complies with Eligibility criteria 4 - Contractual provisions to ensure that those operating the CPA are aware and have agreed that their activity is being subscribed to the PoA. In the case that the CME is not responsible for implementing the CPA, the organization responsible for CPA implementation has signed a contractual agreement with the CME to participate in the PoA. This agreement: 1) Defines the ownership of the carbon emission reduction rights, 2) Covers the distribution and monitoring related responsibilities of the parties involved, 3) Confirms that the ICS to be distributed under the CPA have not and will not be distributed under any other carbon project (CDM project, PoA or voluntary carbon market project) 4) Cedes the rights to the carbon credits generated from CPAs under the PoA to the CME.	/2/	DR	The CME is the CPA implementer for CPA-001. DNV has received an agreement between CME and Up Energy Uganda Ltd declaration The declaration reflects that the parties are aware and have agreed that their activity is being subscribed to the PoA./24//25//26//27//28//29//30/		OK
	B.5.5 Has it been sufficiently justified that the CPA complies with Eligibility criteria 5 - The CME and the CPA operator (in case of being different from the CME) shall confirm that there is no public funding or in the case of public funding, the annex I party will confirm that funding is not a diversion of Official Development Assistance.	/2/	DR	During the Validation DNV did not find any evidence that there is any public funding obtained for this project. The CME has stated that there is no public funding obtained for this project activity in Appendix 2 of the CPA –DD.		OK
	B.5.6 Has it been sufficiently justified that the CPA complies with Eligibility criteria 6 - CPA start date shall not be before PoA validation start date (i.e. not prior to webhosting date for global stakeholder consultation). Please note that not all ICS installations may have been deployed at the CPA inclusion stage, however the ICS start date can also be checked during verification. In the event that any deployed ICS are found not to be in line with CPA start date, those ICS will not be counted in the emission reduction calculation.	/2/	DR	The CPA has not yet been implemented. The PP proposes to start the distribution of the cook stoves after the registration of the PoA and inclusion of the first CPA. Date in CPA-DD 1 February 2014. Starting date as stated in the CPA-DD is after PoA start date). The sales receipt of the first ICS will be submitted to the DOE at the time verification as		OK

			evidence.		
B.5.7 Has it been sufficiently justified that the CPA complies with Eligibility criteria 7 - CPA crediting period not to exceed the PoA end date and the start date of the crediting period of a CPA shall be on or after:(i) The date of registration of the PoA, if the corresponding CPA-DD is submitted together with the request for registration; (ii) The date when the CPA was included in accordance with the Project cycle procedure;	/2/	DR	The CPA crediting period is (1 May 2014) and the crediting period is seven years (1 May 2014 – 31 April 2021, which does not exceed the 28 year PoA crediting period (2 August 2011 – 1 August 2039).		OK
B.5.8 Has it been sufficiently justified that the CPA complies with Eligibility criteria 8 - CME approved each CPA to be included into its registered PoA.	/2/	DR	The CME has provided a statement in the CPA-DD Section A.4 providing approval for the CPA to be included in the PoA.		OK
B.5.9 Has it been sufficiently justified that the CPA complies with Eligibility criteria 9 - The CPA consists of replacement of conventional firewood cookstoves for biomass fired ICS as defined in section A.6 of the PoA-DD. Conventional stoves replaced will be any of the types identified by each baseline scenario and as applied by the specific CPA. Stove types replaced and implemented will be defined in the CPA-DD, and hence appliances involving the efficiency improvements in the thermal applications of non-renewable biomass as per AMS II. G, ver. 5. Please note that not all ICS may have been deployed at CPA inclusion stage, the 'type and number of ICS deployed' will however also be checked during verification, and in case any deployed ICS type will be found not in line with the methodology requirement, those ICS will not be counted for emission reduction calculation.	/2/	DR	The CME has provided the manufacturing specifications for Ezy stove. The Ezy is a biomass fired ICS for non-institutional biomass users. The Ezy stove will replace the conventional firewood stoves of the types "traditional wood stoves", "traditional charcoal stoves", "improved wood stoves" and "improved charcoal stoves" and "others".		OK
B.5.10Has it been sufficiently justified that the CPA complies with Eligibility criteria 10 - The ICS disseminated under the CPA will be single pot, multi pot or in-situ cookstoves that have a specified efficiency of at least 20% at the time of CPA inclusion.	/2/	DR	The CME has submitted the certificate from Approvecho Research Center: Results of Testing the Paradigm project stove (Ezy stove),The efficiency of the Ezy stove is 27.8%/38/		OK

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B.5.11Has it been sufficiently justified that the CPA complies with Eligibility criteria 11 - Only ICS of the types below will be disseminated: o Biomass fuelled ICS o Newly operational ICS o Either fix/portable operation 4.17.3 Other requirements (i.e. efficiency, maximum capacity, level of service, distribution mechanisms…) are defined in the relevant eligibility criteria within this table. 4.17.4 4.17.5 Please note that not all ICS may have been deployed at CPA inclusion stage, the technical requirement will however also be checked during verification, and in case any deployed ICS type will be found not to be in line with the technical requirement, those ICS will not be counted for emission reduction calculation. 4.17.6		DR	The sales receipt will be submitted at the time of verification to demonstrate that only new ICS were deployed as part of this CPA.FAR 4		OK
B.5.12Has it been sufficiently justified that the CPA complies with Eligibility criteria 12 - In accordance with methodology AMS-II.G: Project participants are able to show that non-renewable biomass has been used since 31 December 1989, using survey methods	/2/	DR	This has been demonstrated in the PoA DD.		OK
B.5.13Has it been sufficiently justified that the CPA complies with Eligibility criteria 13 - In accordance with "Guidance for determining the occurrence of de-bundling under a Programme of Activities (PoA)", if each independent subsystem/ measures included in the CPA of a PoA is no greater than 1% of the small scale threshold defined by the methodology applied, than that CPA of PoA is exempted from performing de-bundling check, i.e. considered as being not a de-bundled component of a large scale activity.	/2/	DR	This has been demonstrated in Section A.12 of the CPA DD. The energy saved from the Ezy model cook stove distributed in this CPA is 0.012 GWh /stove/year which is 0.01 % of the small scale limit 180 GWh/year.		OK
B.5.14Has it been sufficiently justified that the CPA complies with Eligibility criteria 14 - The CPA will remain under the thermal threshold of 180 GWh_{th}/a thermal energy	/2/		The first CPA proposes to distribute ICS that will achieve energy saving of 0.012 GWh per stove per year. The first CPA will have a cap		OK

	savings (threshold as per clarification request SSC_233) throughout the crediting period of the CPA. Furthermore, the aggregate energy savings of a single project activity shall not exceed the equivalent of 60 GWh per year or 180 GWh thermal per year in fuel input. If a CPA exceeds the applicable limit in any year, the claimable emission reduction shall be capped based on the estimated GHG reductions in the CPA-DD. Please note that not all ICS may have been deployed at CPA inclusion stage, the SSC limit for CPAs can however also be checked during verification, and in case any deployed ICS will be found not in line with CPA SSC Limit for CPAs requirement, those ICS will not be counted for emission reduction calculation.			of 15061 ICS that can be distributed for the crediting period of the CPA. This will ensure that the project will have a total energy saving of less than 180 GWhth/year (15061 * 0.012=180) (small scale limit).		
	B.5.15Has it been sufficiently justified that the CPA complies with Eligibility criteria 15 - Additionality of CPA shall be confirmed in line with the Requirements of "Guidelines for demonstrating additionality of small-scale project activities" as described in Section B.1. of this CDM PoA DD. In each SSC-CPA-DD, it shall be demonstrated that: 1) The nominal annual energy savings of each ICS is lower than 5% of the applicable limit for Type II small scale CDM project activities i.e. of 180 GWhth, 2) In each SSC-CPA-DD, it shall be demonstrated that the number of ICS to be distributed in a given CPA multiplied by the nominal energy savings of each ICS in a given CPA per annum is lower than the applicable limit for Type II small scale CDM project activities i.e. of 180 GWhth, 3) The project activities are solely composed of isolated units where the users of the technology/measure are households or communities or Small and Medium Enterprises (SMEs)	/2/		The CPA-001 meets the additionality guidelines of the small-scale projects, paragraph 2(c) as described in the PoA DD. 1) CPA-001 does not exceed the small scale CDM threshold 180 GWh therms. This has been demonstrated in eligibility criteria 14. 2) CPA -001 proposes to distribute ICS (which isolated units) to households, and The energy saving by each ICS is 0.012 GWh/stove/year, which is less that 5% of 180 GWh therm per year (9 GWh/year).		OK
	B.5.16Has it been sufficiently justified that the CPA complies with Eligibility criteria 16 - Each CPA will ensure compliance with the applicability of the methodology and its requirements. Conditions of the applicability of the methodology and its requirements are demonstrated at the	/2/		Applicability of the methodology AMS-II.G, version 5: "The aggregate energy saving of a single project activity shall not exceed the equivalent of 60 GWh per year or 180 GWh thermal per year in fuel input"		OK

	PoA level through the assessment of "application of the methodology" in section B.3.			The CPA-001 has met this condition as described in criteria 14 (D.5.14)		
4.17.7 4.17.8	B.5.17Target groups have been established by means of the baseline at the PoA level, as described in Appendix 3 of the PoA-DD. In summary, eligible target groups are any of the following: o Non-institutional biomass users o Institutional biomass users Assumptions made at the PoA level for any scope regarding these target groups are deemed valid through all CPAs (i.e. baseline studies, ER calculation, monitoring plan).	/2/		The target group for CPA-001 is non-institutional biomass users.		OK
	B.5.18Has it been sufficiently justified that the CPA complies with Eligibility criteria 18 - Distribution mechanisms have been established in the PoA-DD by means of the "General operating and implementing framework of PoA" at the PoA level.	/2/		The distribution mechanism has been described in Section A.5 of the CPA-001 and is in lines with the general operating and implementing framework of PoA.		OK
	B.5.19Has it been sufficiently justified that the CPA complies with Eligibility criteria 19 - The Local Stakeholder Consultation is established at the PoA level as described in the PoA-DD. No further actions needed at the CPA level to satisfy the eligibility criteria.	/2/		The conditions to meet the requirements on undertaking the local stakeholder consultation have been proven the PoA-DD.		OK
	B.5.20Has it been sufficiently justified that the CPA complies with Eligibility criteria 20 - The EIA is established at the PoA level as described in the PoA-DD. No further actions needed at the CPA level to satisfy the eligibility criteria.	/2/		The conditions to meet the requirements on undertaking the environmental impact assessment have been proven in the PoA-DD.		OK
	B.5.21Has it been sufficiently justified that the CPA complies with Eligibility criteria 21- Sampling of appliances within the CPA must meet the requirements of AMS-II.G v.5 and the "Standard on Sampling and Surveys for CDM Projects and Programmes of Activities" (the Sampling Standard). Each CPA will ensure compliance with the framework established for sampling requirements for	/2/		The sampling plan for the CPA is provided in Appendix 3 of the CPA-DD. The sampling plan is in lines with the sampling plan proposed in the PoA-DD. The sampling plan meets the requirements of the "Standard on Sampling and Surveys for CDM		OK

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	quantification of parameters not established at the ex-ante and monitoring tasks during the crediting period. Conditions and its requirements are outlined for baselines and the monitoring tasks at the PoA-DD.			Projects and Programmes of Activities" (the Sampling Standard).		
	B.5.22Has it been sufficiently justified that the CPA complies with Eligibility criteria 22: Each CPA shall demonstrate how the baseline parameters for baselines not established at the PoA level (that applies for institutional baselines not applicable at the first CPA at the time of PoA registration) that are to be calculated at the CPA level have been determined. Parameters to be monitored are listed in the CPA-DD	/2/		a) The B_{old} for CPA 1 is: Urban population: 10.23 tons wood-eq/HH-yr Rural population: 5.14 tons wood-eq/HH-yr. b) η_{old} – 10% from survey/**8**/ has been chosen in lines with the AMS-IIG, version 5 and the PoA DD. The CPA-DD Section D.6.2 and Appendix 3 outline the approach.		OK
B.6	**Algorithms and/or formulae used to determine emission reductions of each CPA (VVS § 96-100)**					
	Data and parameters that are available at validation and that are not monitored					
	B.6.1 How was the insert parameter available at validation verified?	/1/	DR	B_{old} – Urban population: 10.23 tons wood-eq/HH-yr, Rural population: 5.14 tons wood-eq/HH-yr - - Quantity of wood used in the absence of the project activity in tonnes as determined in the POA. Fixed at the PoA level using baseline survey		OK
	B.6.2 How was the insert parameter available at validation verified?	/1/	DR	f_{NRB} The methodology AMS II.G, version 3, states that the wood biomass is renewable if one of the following two conditions is satisfied. Condition II is woody biomass that originates	~~CAR 10 CL 2~~	OK

			from non-forest areas (e.g., croplands, grasslands) (a) The land area remains as non-forest or is reverted to forest; and (b) Sustainable management practices are undertaken on these land areas to ensure in particular that the level of carbon stocks on these land areas does not systematically decrease over time (carbon stocks may temporarily decrease due to harvesting); and (c) Any national or regional forestry, agriculture and nature conservation regulations are complied with. The project proponent calculates the DRB value assuming that all the woody biomass is sourced from forests. Hence the DRB value calculated is 0. As a part of the site visit, DNV interviewed Mr. John Dissi representing National Forestry Authority. As per official records shared during the site visit, the farm lands have increased in area from 8.4 Million hectare to 8.85 Million hectare between 1990 and 2005. It was also confirmed by officials that the primary source of charcoal fuel is forest (woodlands) and wood fuel used by household is mainly from farmland. In addition, DNVs interviews with the		

			households indicated that wood fuel was collected from nearby grasslands and croplands. In the Kitchen Survey conducted by the project participant, the questionnaire does not cover where the wood is sourced from grassland, cropland, and forests or if it is purchased (this information is sometimes provided under comments). Hence, the survey can not be used to get an understanding of the percentage of wood fuel being sourced from grassland or farmland. The project proponent should consider the woody biomass that is sourced from grassland, cropland etc in the estimation of the DRB value. $f_{nrb,y}$- 0.82- Fraction of woody biomass saved by the project activity in period y that can be established as non-renewable biomass. Fixed at the PoA level		
B.6.3 How was the insert parameter available at validation verified?	/1/	DR	$NCV_{biomass}$- 0.015 TJ/tonne - Net calorific value for biomass Fixed at the PoA level, default value from AMS-II.G, version 5		OK
B.6.4 How was the insert parameter available at validation verified?	/1/	DR	$EF_{projected\_fossil\_fuel}$- 81.6 tCO2/TJ - Emission factor for the substitution of non-renewable woody biomass by similar consumers Fixed at the PoA level, default value from AMS-II.G, version 5		OK
B.6.5 How was the insert parameter available at validation	/1/	DR	The methodology AMS II.G, version 3,	~~CAR 6~~	OK

verified?			Option 2 – allows η_{new} (Efficiency of the new system) and η_{old} (Efficiency of the old system) for multiple systems to be determined through the use of weighted average values. However, these systems should be using the same fuel. The project proponent has a single baseline for charcoal stoves and wood fuel stoves. The weighted average has been used to determine the η_{new} (Efficiency of the new system) and η_{old} (Efficiency of the old system) for households (HH) using charcoal and wood fuel. The CME has not identified two separate baselines for the HHs using charcoal and HHs using wood fuel. η_{old}- 10.65 % - Efficiency of the system being replaced as part of the SSC-CPA. Review of the baseline Survey **/8/**, site visit, interview of households /45/	~~CAR 9~~ ~~CAR 8~~ ~~CAR 11~~	
B.6.6 How was the insert parameter available at validation verified?	/1/	DR	L – 0.95 – Leakage factor Fixed at PoA level		OK
B.6.7 How was the insert parameter available at validation verified?	/1/	DR	$\eta_{specified}$- 27.8% - Efficiency of the system being deployed at the time of CPA inclusion The efficiency of the ICS model Ezy stoves was verified using the Approvecho Research Center: Results of Testing the Paradigm project stove (Ezy stove), October 2012.		OK

MoV = Means of Verification, DR= Document Review, I= Interview, CC= Cross-Checking

			This value will not be used for ex-post emission reduction calculation. For ex-post calculation the efficiency for the ICS distributed under this CPA will be monitored as η_{new}.		
B.6.8 In case any of the parameters above were determined based on sampling, was the sample adequate and did it comply with the specific guidance in the applicable methodology or, if no such guidance is available in methodology, did it achieve a 90/10 confidence/precision as the criteria for reliability of sampling efforts for small-scale project activities and 95/10 for large scale project activities?	/1/	DR	The "General guidance for sampling and surveys for small scale CDM project activities", version 1 (EB 50 Annex 30) provides guidance on choosing a sample size and a representative sample. Reference – Kitchen Survey Report 2011 The project proponent has not described the basis for the following: a. The adequacy of the sample size and the representative sample. b. The basis of dividing the country into four regions c. The basis on which the district in each region has been selected Additionally, the sample has not been chosen based on the target population for the different baseline fuel (Charcoal or wood fuel). The project proponent shall describe the sampling plan in lines with the "General guidance for sampling and surveys for small scale CDM project activities" and methodology AMS II.G, version 3.	CAR 7	OK
Baseline emissions					
B.6.9 Are the calculations documented according to the approved methodology and tool and in a complete and	/1/	DR	The emission reductions are based on the biomass		OK

transparent manner?			fuel savings achieved by the project activity. The calculations of the baseline emissions are according to the PoA DD dated 30 June 2014		
B.6.10Have conservative assumptions been used when calculating the baseline emissions?	/1/	DR	Conservative assumptions have been used in estimating the baseline emissions		OK
B.6.11Are uncertainties in the baseline emission estimates properly addressed?	/1/	DR	The uncertainties in the baseline emission estimated have been properly addressed		OK
B.6.12If the calculations of baseline emissions are based on sampling, does this comply with the Standard for sampling and surveys?	/1/	DR	The parameter B_{old} is determined using sampling and has been fixed at the PoA level. Estimation of B_{old} is in compliance with Standard for sampling and surveys.		OK
Project emissions					
B.6.13Are the calculations documented according to the approved methodology and tool and in a complete and transparent manner?	/1/	DR	The emission reductions are based on the biomass fuel savings achieved by the project activity. The calculations of the emission reduction are according to the PoA DD. The CPA uses option 2 for the estimation of the $B_{y,saving}$. **Option 2:** $B_{y,savings} = B_{old} * (1 - \eta_{old} / \eta_{new})$ **Equation (3)** Where: B_{old} Quantity of biomass used in the absence of the project activity in tonnes/ year η_{old} 10% η_{new} Efficiency of the system being deployed as part of the project activity (fraction), as determined using the Water Boiling Test (WBT) protocol. Use weighted average values if more		OK

			than one type of system is being introduced by the project activity.		
B.6.14Are uncertainties in the project emission estimates properly addressed?	/1/	DR	The uncertainties in the baseline emission estimated have been properly addressed		OK
B.6.15If the calculations of project emissions are based on sampling, does this comply with the Standard for sampling and surveys?	/1/	DR	The parameter B_{old} is determined using sampling and has been fixed at the PoA level. Estimation of B_{old} is in compliance with Standard for sampling and surveys.		OK
Leakage					
B.6.16Are the leakage calculations documented according to the approved methodology and in a complete and transparent manner?	/1/	DR	In accordance with the PoA DD and AMS-II.G, version 5 this CPA will choose the option of multiplying Bold by a net to gross adjustment factor of 0.95 to account for leakages, in which case surveys and additional monitoring are not required.		OK
B.6.17Have conservative assumptions been used when calculating the leakage emissions?	/1/	DR	No CPA specific assumptions have been used – the leakage has been addressed at the PoA level and is applicable to all CPAs		OK
B.6.18Are uncertainties in the leakage emission estimates properly addressed?	/1/	DR	No CPA specific uncertainties have been identified - the leakage uncertainty has been addressed at the PoA level and is applicable to all CPAs		OK
B.6.19If the calculations of leakage emissions are based on sampling, does this comply with the Standard for sampling and surveys	/1/	DR	The calculations of leakage emissions are not based on sampling.		OK
Emission Reductions					
B.6.20Algorithms and/or formulae used to determine emission reductions: • All assumptions and data used by the project participants are listed in the PoA-DD and related document submitted for registration. The data are properly referenced • All documentation is correctly quoted and interpreted. • All values used can be deemed reasonable in the context of	/1/	DR	DNV has been able to verify and confirm that • All assumptions and data used by the project participants are listed in the CPA-DD and related document submitted for registration. The data are properly referenced • All documentation is correctly quoted		OK

the project activity • The methodology has been correctly applied to calculate the emission reductions and this can be replicated by the data provided in the PoA-DD and supporting files to be submitted for registration.			and interpreted. • All values used can be deemed reasonable in the context of the CPA The methodology has been correctly applied to calculate the emission reductions and this can be replicated by the data provided in the PoA-DD and supporting files to be submitted for registration.		
B.7 Monitoring plan (VVS § 131-133)					
Data and parameters monitored					
B.7.1 Do the means of monitoring described in the plan comply with the requirements of the methodology?	/1/	DR	The monitoring plan has been documented as per the methodology AMS-II.G, version 5 in a complete and transparent manner. The monitoring plan for the CPA is as described in Section 4.8.3 of the PoA DD.		OK
B.7.2 Does the monitoring plan contains all necessary parameters, and are they clearly described?	/1/	DR	The CPA-DD contains all the monitoring parameters and they are clearly described. η_{new-} Efficiency of the appliance being deployed as part of the SSC-CPA, weighted average if multiple systems N_y- Number of appliances U_y- Average usage rate of appliances being deployed during period y as part of the SSC-CPA μ_{old-} Quantity of woody biomass used in the *project activity* by traditional stoves per household		OK
B.7.3 In case parameters are measured, is the measurement equipment described? Describe each relevant parameter.	/1/	DR	η_{new-} Efficiency of the appliance being deployed as part of the SSC-CPA, weighted average if multiple systems – WBT tests N_y- Number of appliances – Sales record U_y- Average usage rate of appliances being deployed during period y as part of the SSC-CPA		OK

			- Survey μ_{old-} Quantity of woody biomass used in the *project activity* by traditional stoves per household - Survey		
B.7.4 In case parameters are measured, is the measurement accuracy addressed and deemed appropriate? Describe each relevant parameter.	/1/	DR	There are no meters used for monitoring. 95/10 confidence/precision is applied for calculating the sampling size		OK
B.7.5 In case parameters are measured, are the requirements for maintenance and calibration of measurement equipment described and deemed appropriate? Describe each relevant parameter.	/1/	DR	There are no meters used for monitoring.		OK
B.7.6 Is the monitoring frequency adequate for all monitoring parameters? Describe each parameter.	/1/	DR	η_{new-} Efficiency of the appliance being deployed as part of the SSC-CPA, weighted average if multiple systems – WBT tests – Biennial – the PP will demonstrate that there is no significant difference in energy efficiency during this period at the verification stage. N_y- Number of appliances – Sales record - continuous U_y- Average usage rate of appliances being deployed during period y as part of the SSC-CPA – Survey - Biennial μ_{old-} Quantity of woody biomass used in the *project activity* by traditional stoves per household – Survey - Biennial		OK
B.7.7 In case any of the parameters will be determined based on sampling, is the sample plan adequate and does it comply with the specific guidance in the applicable methodology or, if no such guidance is available in methodology, does it achieve a 90/10 confidence/precision as the criteria for reliability of sampling efforts for small-scale project activities and 95/10 for large scale project activities?	/1/	DR	The sampling plan for $\eta_{new,}$ U_y and μ_{old} has been described in the CPA DD and comply with the specific guidance in the applicable methodology.		OK

Ability of project participants to implement monitoring plan					
B.7.8 How has it been assessed that the monitoring arrangements described in the monitoring plan are feasible within the project design?	/1/	DR	The monitoring arrangements described in the monitoring plan are feasible		OK
B.7.9 Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)?	/1/	DR	The PP should identify day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	~~CAR 19~~	OK
B.7.10Are the data management and quality assurance and quality control procedures sufficient to ensure that the emission reductions achieved by/resulting from the project can be reported ex post and verified?	/1/	DR	The data management and quality assurance and quality control procedures sufficient to ensure that the emission reductions achieved by/resulting from the CPA can be reported ex post and verified		OK
B.7.11Will all monitored data required for verification and issuance be kept for two years after the end of the crediting period or the last issuance of CERs, for this project activity, whichever occurs later?	/1/	DR	The data will be archived for two years after the end of the crediting period		OK
Monitoring of sustainable development indicators/ environmental impacts					
B.7.12Is the monitoring of sustainable development indicators/ environmental impacts warranted by legislation in the host country?	/1/	DR	The monitoring of sustainable development indicators/ environmental impacts is not warranted by legislation in the host country. This has been determined at the PoA level		OK
B.7.13Does the monitoring plan provide for the collection and archiving of relevant data concerning environmental, social and economic impacts?	/1/	DR	The monitoring plan provides for the collection and archiving of relevant data concerning environmental, social and economic impacts		OK
B.7.14Are the sustainable development indicators in line with stated national priorities in the host country?	/1/	DR	The sustainable development indicators are in line with stated national priorities in the host country		OK

Table 3 Resolution of corrective action requests and clarification requests

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
CAR 1 **DNA Approval** The project proponent should submit the Letter of Approval from DNA of Uganda for both project participants The Letter has to support the following requirements a) LoA confirms that Party has ratified the Kyoto Protocol b) LoA confirms that participation is voluntary c) The LoA confirms that the project contributes to the sustainable development of the host country? d) The LoA refers to the precise project activity title in the PDD e) The LoA is unconditional with respect to (a) to (d) above The LoA is issued by the respective Party's DNA	The letter of approval request has been submitted to the Ugandan DNA. The letter will be provided as it is available.	The Letter of approval from the DNA of Uganda has been received./14/ **CAR 1 closed**
CAR 2 The CDM-EB requires the GPS co-ordinates to be provided for the PoA DD and each CPA DD. The GPS co-ordinates has not been provided in the CPA-DD for CPA boundary.	Done. The first CPA-DD has been updated to include the GPS coordinates. See section 4.1.2. The generic CPA-DD has been updated to include the GPS coordinates. See section 4.1.2.	The GPS coordinates have been entered in the CPA DD, version 3. **CAR 2 is closed**

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
CAR 3 **Applicability** The applicability criteria for AMS II.G, version3 states "The project participants are able to show that non-renewable biomass has been used since 31 Dec 1989, using survey methods or referring to published literature, official reports or statistics." Section E.2 of the PoA DD states "Uganda suffers remarkable deforestation at least since the beginning of the 21st century as reported by FOSA". The project proponent needs to demonstrate that the deforestation was since 31 December 1989.	Done. PoA-DD section E.2 updated. "Forest degradation in Uganda has been a consistent problem for decades, and non-renewable biomass has been used since before 31 Dec 1989. According to the FOSA study in Uganda, from 1988 to 1999, wood production increased by 1% faster than the population growth. In a country with already high levels of population growth, this implies an over exploitation of forest resources.[4] During the rule of Idi Amin (1971-1979), civil and political conflict had severe consequences for forest resources in Uganda. From 1971 to 1987, Uganda lost 50 percent of its forests, including virtually all of its primary forests. Between 1990 and 2005, Uganda lost 26.3 percent of its remaining forest cover, and current deforestation continues at a rate of 2.2 percent per year.[5]"	From 1988 to 1999, wood production increased by 1% faster than the population growth implying an over exploitation of certain forest areas (Claus-Michael Falkenberg et al, 2000). http://www.fao.org/DOCREP/004/AC427E/AC427E07.htm#7188 This demonstrates that deforestation has been occurring prior to 1989. Hence, the HHs collecting wood from forests have been using non-renewable biomass since 31 Dec 1989. **CAR 3 is closed.**
CAR 4 **Eligibility** The CPA eligibility criteria is not in lines with the requirements of Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for	Done. First CPA-DD section B.2 updated, PoA-DD updated & generic CPA updated.	**CAR 4 (continued)**

[4] FOSA 2001, http://www.fao.org/DOCREP/004/AC427E/AC427E07.htm#7188
[5] MongaBay, http://rainforests.mongabay.com/20uganda.htm

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
programme of activities		
CAR 4 (a) The project proponent is not clear whether the baseline is being demonstrated and established at the PoA level. Additionally, The PoA DD Section A.4.2.2., # 3 – Baseline: states "Each SSC-CPA will apply the baseline as for the methodology from sectoral scope 03 AMS II.G-v03 "Energy Efficiency Measures in Thermal Applications of Non-Renewable Biomass". The methodology can result in different baselines e.g. ceramic stoves using charcoal or three stone wood fuel stoves etc. The baseline scenario for this specific CDM PoA in Uganda should be clearly described and the CPA inclusion criteria should be complimentary to the established baseline.	Done. Eligibility criteria for CPA inclusion in the PoA has been updated to clarify that two baselines (baseline 1 and 2) have been established at the PoA level as described in section E.4 of this PoA-DD. They follow the requirements as for the methodology from sectoral scope 03 AMS II.G-v03 "Energy Efficiency Measures in Thermal Applications of Non-Renewable Biomass". Thus, the SCC-CPA involves one or more baseline/s as specified in section A.2 of the specific CPA-DD. The baseline/s applicable to each CPA have been established at the PoA level.	The PoA-DD is revised and eligibility criteria now meets the requirements of Standard, "Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of Activities", version 03.0 **CAR 4 is closed**
CAR 5 Eligibility Criteria Applicability of the Methodology AMS-II.G, version 5 - The aggregate energy savings of a single project activity shall not exceed the equivalent of 60 GWh per year or 180 GWh thermal per year in fuel input. The PoA DD and CPA-DD does not list the above requirement as the applicability criteria for AMS-II.G, version 5.	Eligibility Criteria #14 has been updated to state: "Applicability of Methodology AMS-II.G V5 and SSC Limit for CPAs". Eligibilty criteria as been updated to include "Furthermore, the aggregate energy savings of a single project activity shall not exceed the equivalent of 60 GWh per year or 180 GWh thermal per year in fuel input." Eligibility Criteria #16, 12, 10, 9 have been changed from "*Applicability* of Methodology…" to "*Requirement* of Methodology…"	The PoA-DD is revised and eligibility criteria now meets the requirements of Standard, "Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of Activities", version 03.0 **CAR 5 is closed**

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
PoA-DD B.2 lists the Applicability of Methodology AMS-II.G as Criteria 9, 10, and 12		
CAR 6 **Baseline Determination** The methodology AMS II.G, version 3, Option 2 – allows η_{new} (Efficiency of the new system) and η_{old} (Efficiency of the old system) for multiple systems to be determined through the use of weighted average values. However, these systems should be using the same fuel. The project proponent has a single baseline for charcoal stoves and wood fuel stoves. The weighted average has been used to determine the η_{new} (Efficiency of the new system) and η_{old} (Efficiency of the old system) for households (HH) using charcoal and wood fuel. The CME has not identified two separate baselines for the HHs using charcoal and HHs using wood fuel.	A national level baseline has been established at the PoA level against which only improved efficiency wood stoves will be credited. (In the future the project proponent may credit improved charcoal stoves for which a new baseline will be established at that time at the CPA level.) The national level baseline developed for crediting improved wood stoves accounts for pervasive baseline fuel mixing of wood and charcoal which inhibits the identification of separate charcoal and wood fuel baselines. Hence, the baseline for crediting improved wood stoves is a weighted baseline that accounts for average levels of wood and charcoal consumption and fuel mixing in both urban and rural populations. The baseline is currently weighted based on the proportions of the Ugandan urban and rural populations, 15% and 85% respectively, and the corresponding wood and charcoal consumption patterns found in the baseline survey. Over the project period the proportion of stove sales in urban and rural areas will be used to update the weighted baseline in order to accurately reflect the baseline wood and charcoal	**CAR 6 (continued)**

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
	consumption of improved wood stove purchasers.	
CAR 6 (a) The project proponent proposes to set up a national level baseline for the PoA. The baseline scenario is the mixed use of charcoal and wood fuel (biomass) in low efficiency stoves in rural and urban HHs in Uganda The project proponent proposes that "Over the project period the proportion of stove sales in urban and rural areas will be used to update the weighted baseline in order to accurately reflect the baseline wood and charcoal consumption of improved wood stove purchasers" The equation on the ex- post revision of the baseline emission factors based on the stove sales in urban and rural areas and fuel consumption pattern has to be provided in the PoA DD.	On this respect the project proponent will provide information of the portion of stoves implemented in rural and urban areas for as many stoves are needed to satisfy a statistically valid sample size to complete the monitoring plan. When monitoring results show that the actual urban/rural distribution ratio is different from the national ratio at which the baseline has been established (15/85 respectively) the project proponent will reassess the ER using a comparable scenario representative to the actual sales up to the date. This will be done as described in equation (3). See section E.6.2.	CAR 6 continued below
CAR 6 (b) The project proponent states "The baseline is currently weighted based on the proportions of the Ugandan urban and rural populations, 15% and 85% respectively, and the corresponding	The "baseline technology parallel use" survey will capture the relative usage of the baseline technology by measuring the reduction of the baseline fuels (wood as well as charcoal) after project implementation and an adjustment factor	CAR 6 continued below

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
wood and charcoal consumption patterns found in the baseline survey." After project implementation, if the surveys identify that the improved wood fuel stoves are replacing only wood fuel consumption and do not impact the charcoal consumption in urban or rural areas. How is this taken into account?	would be applied based on this usage to discount against the baseline consumption established. See section 4 "baseline technology parallel use" survey and section E.6.2 equation (3) and (4).	
CAR 6 (c) The project proponent states that "A national level baseline has been established at the PoA level against which only improved efficiency wood stoves will be credited (In the future the project proponent may credit improved charcoal stoves for which a new baseline will be established at that time at the CPA level)". DNV is not clear on how the project proponent proposes to include a new baseline at the CPA level. Project proponent to provide more information on the same.	Two baselines (baseline 1 and baseline 2) have been established at the PoA level. The baselines scenario identified in this PoA will serve to calculate the emission reductions creditable from the sale of biomass fuel stoves. Thus baseline 1 will be applied to all sales from non-institutional charcoal and wood fuelled stoves, while baseline 2 will be applied to institutional stoves. Baseline 1 (non-institutional biomass users): A series of studies have been undertaken to establish the framework as well as to quantify a fixed value for the fuel consumption. Baseline 2 (institutional biomass users): Literature has been used to assess the cooking practices within the baseline scenario 2 to build the framework of such a baseline at the PoA. The	The CME has identified two baselines: Baseline 1 (non-institutional biomass users Baseline 2 (institutional biomass users): In the baseline, the CME has estimated the B_{old} value for rural households using wood fuel and B_{old} value for urban households using charcoal. **CAR 6 is closed**

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
	conclusions from the literature will be used to set the representative methods to quantify the baseline fuel consumption. Thus, a series of surveys will be undertaken at the time when the first CPA applies this baseline scenario. Details of the methods/procedures used in the literature used to conduct those studies and conclusive reasoning used to achieve the baseline fuel consumption are provided in annex 3 of the PoA[6]. Results from the survey toward the quantification of the baseline fuel consumption will be provided at the first CPA applying this baseline and will be deem valid for the subsequent CPAs using the same baseline. See section E.4 for further description of both baselines.	
CAR 7 **Baseline Survey** The "General guidance for sampling and surveys for small scale CDM project activities", version 1 (EB 50 Annex 30) provides guidance on choosing a sample size and a representative sample. Reference – Kitchen Survey Report 2011	Done. See Annex 3.	The project proponent has provided a sampling plan description (Annex 3 – PoA DD). The sampling plan and size was designed to meet a 90/10 confidence/precision for the baseline results. A total of 400 HHs were surveyed in the baseline survey.

[6] CDM PDD Annex 3 – baseline institutional framework.

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
The project proponent has not described the basis for the following: d. The adequacy of the sample size and the representative sample. e. The basis of dividing the country into four regions f. The basis on which the district in each region has been selected Additionally, the sample has not been chosen based on the target population for the different baseline fuel (Charcoal or wood fuel). The project proponent shall describe the sampling plan in lines with the "General guidance for sampling and surveys for small scale CDM project activities" and methodology AMS II.G, version 3.		The project proponent has chosen the region and districts for sampling based on target population, climate, economy, demographic and livelihood. The baseline survey was conducted in urban and rural areas. The charcoal consumption in urban areas is high and the wood fuel consumption in rural areas is high. 25% of the HHs use wood fuel and charcoal. Hence, the target population was urban and rural HHs. **CAR 7 is closed.**
CAR 8 **Baseline Survey** During the site visit DNV identified that there were a variety of improved cook stoves in the market. Some included grate and chimney and can be classified as an ICS, others were manufactured stoves, but could not be classified as an ICS. In the survey, the project proponent is making a note of the number of improved cook stoves in HH. However, the type of improved cook stove is not being noted. The project proponent	Done. The type of traditional and improved cookstoves found in baseline 1 are described in Annex 3- "Baseline Non-institutional CIRCODU findings", section 2.1 named "cooking practices".	Annex 3- "Baseline Non-institutional CIRCODU findings" provides a description of the types of traditional stoves used in the Uganda. **CAR 8 is closed**

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
has to describe the types of cook stoves that being considered as improved and the types considered as traditional? The basis on which ICS were classified as ICS or standard cook stove.		
CAR 9 **Baseline Calculation** The methodology AMS II.G, version 3, specifies that the default can be used only for 3 stone cook stove, or conventional system with out improved combustion air supply, flue gas ventilation (grate or chimney); for other types of systems a default value of 0.2 may be optionally used. During the site visit, DNV observed that there were several varieties of traditional and locally manufactured cook stoves. The PDD states that for the estimation of $B_{y,savings,}$ η_{old} (Efficiency of the system being replaced) will use a default factor of 0.1. The project proponent should demonstrate that the default factor of 0.1 is used for three stone fire, or a conventional system with no improved combustion air supply or flue gas ventilation system, i.e. without a grate or a chimney;	Done. Full explanation and calculations are provided in PoA-DD Annex 3; Baseline-Non-inst-Analysis_report. The default factor 0.1 is used for both traditional wood and charcoal stoves and 0.2 for improved wood and charcoal stoves found in the baseline. The proportion of each of these four stove types in the baseline is weighted to provide an aggregate baseline default efficiency of 10.65%. Updated Annex 3 – "Baseline Non-institutional Analysis report" to define the default values were used for the different systems found on the field. See Annex 3 – "Baseline Non-institutional Statistic Analysis" for demonstration of how the default values were used. The type of traditional and improved cookstoves found on baseline 2 are described in section E.4, sub-section "baseline survey representativeness".	The η_{old} (Efficiency of the system being replaced) is determined through the baseline survey date and tests conducted on the baseline stoves identified during the survey. **CAR 9 is closed**

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
CAR 9 (a) The charcoal conversion ratio is 10. Please provide information on the type of charcoal production commonly used in Uganda and provide a reference for the value used.	See Annex 3 – "Baseline Non-institutional Statistic Analysis", cell BV1.	The conversion rate has been changed to 6:1. Default value as per AMS-II.G, ver.5. **CAR 9 a is closed**
CAR 10 **Baseline Calculation** The methodology AMS II.G, version 3, states that the wood biomass is renewable if one of the following two conditions is satisfied. Condition II is woody biomass that originates from non-forest areas (e.g., croplands, grasslands) (d) The land area remains as non-forest or is reverted to forest; and (e) Sustainable management practices are undertaken on these land areas to ensure in particular that the level of carbon stocks on these land areas does not systematically decrease over time (carbon stocks may temporarily decrease due to harvesting); and (f) Any national or regional forestry, agriculture and nature conservation regulations are complied with. The project proponent calculates the DRB value assuming that all the woody biomass is	Done. Forest and non-forest sources of fuel have been assessed to obtain the DRB value. See section "calculating the DRB" from the NRB study.	The revised PoA-DD used the default f_{NRB} value of 0.82. **CAR 10 is closed**

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
sourced from forests. Hence the DRB value calculated is 0. As a part of the site visit, DNV interviewed Mr. John Dissi representing National Forestry Authority. As per official records shared during the site visit, the farm lands have increased in area from 8.4 Million hectare to 8.85 Million hectare between 1990 and 2005. It was also confirmed by officials that the primary source of charcoal fuel is forest (woodlands) and wood fuel used by household is mainly from farmland. In addition, DNVs interviews with the households indicated that wood fuel was collected from nearby grasslands and croplands. In the Kitchen Survey conducted by the project participant, the questionnaire does not cover where the wood is sourced from grassland, cropland, and forests or if it is purchased (this information is sometimes provided under comments). Hence, the survey can not be used to get an understanding of the percentage of wood fuel being sourced from grassland or farmland. The project proponent should consider the woody biomass that is sourced from grassland,		

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
cropland etc in the estimation of the DRB value.		

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
CAR 11 **Baseline Calculation** The methodology AMS II.G, version 3, Option 2 – allows η_{new} (Efficiency of the new system) and η_{old} (Efficiency of the old system) for multiple systems to be determined through the use of weighted average values. The project proponent has calculated the fuel savings by assuming a single baseline for HHs using charcoal stoves and wood fuel stoves. The weighted average has been used to determine the η_{new} (Efficiency of the new system) and η_{old} (Efficiency of the old system) for households (HH) using charcoal and wood fuel. The project participant should recalculate the fuel savings for HHs replacing charcoal stoves and HHs replacing wood fuel stoves.	The project established a national level baseline at the PoA level against which only improved wood stoves are credited in the first CPA. This baseline includes charcoal and wood fuel mixing and hence weighted baseline efficiency (η_{old}) is applied. Fuel savings is calculated by comparing the efficiency of the new systems (η_{new}) to the weighted efficiency of old systems (η_{old}). The level at which improved wood stoves displace the use of charcoal in the baseline will be tracked according to the monitoring plan and the results will be used to adjust the emission reduction calculations accordingly.	The project proposes to establish a national level baseline at the PoA level against which improved wood fuel stoves are credited. CAR 11 (continued)
CAR 11 (a) The project proponent has to provide a description using equations or factors on how the baseline will be revised based on the ex-post surveys. E.g. if it is identified that the sale of improved wood fuel stove has no impact on	The baseline will be revised based on the ex-post surveys as described in equations (3) and (4), section E.6.2. See also updated description in the monitoring	The (3) and (4) in PoA DD provide provide a description on how the baseline will be revised based on the ex-post surveys. **CAR 11 is closed**

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the consumption of charcoal.	plan, PoA-DD section E.7.2, sub-section 4.	
CAR 12 **Additionality** The PoA DD, version 1 Section A.4.3 states "The assessment and demonstration of additionality for a typical SSC-CPA is done at the PoA level as shown in section A.5.1." There is no Section A.5.1 in the PoA DD. This statement has to be revised.	Done. The statement in the PoA-DD has been updated to: "The assessment and demonstration of additionality for a typical SSC-CPA is done at the PoA level as shown in section E.5.1."	The statement in the PoA DD has been revised. **CAR 12 is closed**
CAR 13 **Additionality** The additionality demonstration in Section A.4.3 does not satisfactorily demonstrate additionality for this PoA. The PoA DD, version 1, Section A.4.3 states "Publicly available data states that the penetration rate of ICS in Uganda is only 5%[7], and thus a realistic and credible barrier due to "prevailing practice" can be claimed." The barrier faced due to the prevailing practice has not been described. The 5% market penetration references data from 2007, this information is outdated. A combined market penetration rate has been given for improved	Done. PoA-DD section A.4.3 amended. PoA-DD sections E.5.1 and E.5.2 amended to describe additionality of a typical CPA, and eligibility criteria for determining additionality of a measure PoA (based on Attachment A to Appendix B of 4/CMP.1 Annex II).	The PP has revised the additionality demonstration section. Based on Uganda National Household Survey Report 2009/2010 only 9% of the HHs use improved cook stoves. This demonstrated that the prevailing practice in Uganda is the use of traditional three stone or traditional charcoal stoves. The project proponent has also provided a description of additional barriers faced during various stages of implementation of improved cook stove projects. **CAR 13 is closed**

[7] http://content.undp.org/go/cms-service/stream/asset/?asset_id=2205620

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
charcoal stoves and improved wood fuel stoves. This might not be representative for both types of improves stoves. The PP has not demonstrated additionality using the guidance provided by CDM-EB for PoA's		
CAR 14 Additionality Standard, "Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of Activities", version 03.0 7. Additionality shall be demonstrated by establishing that in the absence of CDM PoA, none of the implemented CPAs would occur. 9. PoAs that consist of one or more small-scale projects as CPAs shall include eligibility criteria derived from all the relevant requirements of the "Guidelines for demonstrating additionality of small-scale project activities". The demonstration on additionality for the PoA is not in lines with the PoA Standard, version 3.0 Section B of PoA DD, B.1 *The information presented here constitutes the demonstration of additionality of the PoA as a whole.* *(i) The proposed PoA is a voluntary coordinated action;*	POA-DD Section B.1 and Eligibility Criteria #15 have been updated to latest Standard for additionality.	Eligibility criteria now meets the requirements of Standard, "Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of Activities", **CAR 14 is closed**

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
(ii) If the PoA is implementing a voluntary coordinated action, it would not be implemented in the absence of the PoA; (iii) *If the PoA is implementing a mandatory policy/regulation, this would/is not enforced;* *These requirements listed in the PoA-DD are no longer part of the standard.*		
CAR 15 Additionality Guidelines On The Demonstration Of Additionality Of Small-Scale Project Activities, version 9.0 - Documentation of barriers, as per paragraph 1 above, is not required for the positive list of technologies and project activity types that are defined as automatically additional for project sizes up to and including the small-scale CDM thresholds (e.g. installed capacity up to 15 MW). The positive list comprises of: (c) Project activities solely composed of isolated units where the users of the technology/measure are households or communities or Small and Medium Enterprises (SMEs) and where the size1 of each unit is no larger than 5% of the small-scale CDM thresholds; The PoA DD, version 2 does not state the requirement from the guideline for small scale project activities that excludes it from the requirement to demonstrate barriers to project	POA-DD Section B.1 and Eligibility Criteria #15 have been updated to comply with the positive list requirements of : *Project activities solely composed of isolated units where the users of the technology/measure are households or communities or Small and Medium Enterprises (SMEs) and where the size1* *of each unit is no larger than 5% of the small-scale CDM thresholds;*	The eligibility criteria includes a criteria for additionality which meets the requirements of Guidelines On The Demonstration Of Additionality Of Small-Scale Project Activities, version 9.0 **CAR 15 is closed**

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
activity.		
CAR 16 **Double Counting** There is currently one registered GS VER improved cook stove project and one GS VER improved cook stove project in validation stage. The project proponent has not documented in the PoA-DD and CPA-DD, the monitoring process for tracking the ICS to the specific CDM PoA and CPA.	Each ICS has a unique serial number that is registered in the project database at the point at which Up Energy sells the ICS. The project database will be regularly checked to ensure no unique serial number is crediting more than once in the project database. The serial numbers will allow each stove found in the field to be immediately identified as part of a specific Project and CPA. Specifics can be found in E.7.2 of the PoA DD under parameter 6.	From the review of the section E.7.2, DNV has been able to confirm that the monitoring records for the PoA will have a record for cook stoves sold under each CPA. The serial numbers will be unique for each CPA and hence there will be no double counting across the CPAs of the project. **CAR 16 (continued)**
CAR 16 (continued) However, DNV is not clear how the project proponent can demonstrate that the cook stoves are not part of another project activity (CDM PoA or GS). Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo) are not present	Updated monitoring plan to demonstrate the methods. See E.7.2 of the PoA.	The stoves distributed under this PoA will carry a logo and a unique identification number. Additionally, the CME will also conduct checks against the CDM and Voluntary standards to check whether additional cook stove projects have been implemented in this region. These conditions are included in the eligibility criteria and will be verified prior to inclusion of every CPA. **CAR 16 is closed**
CAR 17 **Monitoring Plan** AMS II.G, version 3 requires that monitoring	Done. Updated in PoA-DD sections E.6.2, E.6.3. and E.7 and PoA-DD Annex 4; Monitoring Plan. Parallel usage of baseline technologies and	The project proponent has used a Discounting fraction from baseline fuel consumption due to the continued usage

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
plan shall ensure that: • Either the replaced low efficiency appliances are disposed of and not used within the boundary or within the region; or • If baseline stoves continue to be used, monitoring shall ensure that the fuel-wood consumption of those stoves is excluded from B_{old}. During the site visit, DNV visited HHs that was part of the pilot project in Uganda. The project proponent distributed the Jikopoa and Enviorfit cook stoves. In all the households DNV identified that the HHs were using a three stone cook stove in parallel with the ICS. DNV was also able to confirm that these HHs used two three stone cook stoves prior to the purchase of the new stove. The project proponent needs to implement a procedure to identify the number of stoves used by the HH prior to the purchase of the new stove. Additionally, the project proponent shall include a monitoring procedure that shall ensure that the fuel-wood consumption of low	respective fuels to be monitored and discounted in the form of an adjustment factor in the Ers calculation for verification purposes. From PoA-DD Annex 4; Monitoring Plan: The Baseline technology/fuel parallel use survey will account for "Combined discounting fraction from baseline fuel consumption due to: 1) the continued usage of the baseline technologies after purchasing the new one. 2) increase frequency on usage of more intense carbon fuels"	of the baseline technologies after purchasing the new one (P_y). The calculation equation of the discounting fraction or the factor that will be used should be provided in the PoA DD, Section E.7.1. **CAR 17 (continued)**

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
efficiency stoves (if continued) is excluded from B_{old}.		
CAR 17 (a) The project proponent has used a Discounting fraction from baseline fuel consumption due to the continued usage of the baseline technologies after purchasing the new one (P_y). The calculation equation of the discounting fraction or the factor that will be used has not been provided in the PoA DD, Section E.7.1.	Updated section E.6.2 to provide the calculation equations related to the adjustment factors.	The PoA-DD has been revised and the latest version of the PoA-DD does not use this parameter. **CAR 17 is closed**
CAR 18 The project proponent needs to submit all contracts with manufacturers, distributors, retailers, etc to ensure that carbon rights have been passed to the project proponent.	Done. Contract with CIRCODU, Envirofit, Jikopoa and UpEnergy-Impact Carbon agreement shared with DNV via dropbox.	The agreements with CIRCODU, Envirofit, UpEnergy, Jikopoa, NDA Eneco Energy Trade have been submitted to DNV. **CAR 18 is closed.**
CAR 19 Standard, "Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of Activities", version 03.0 19. The CME shall have the competencies to check the features of potential CPAs and ensure that each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA. The CME shall develop and implement a management system that includes	Revised PoA-DD	POA-DD Section C Management System has been updated to demonstrate the requirements of *Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities* **CAR 19 is closed**

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
the following made available to the DOE at the time of validation of the PoA: u) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies; v) Records of arrangements for training and capacity development for personnel; w) A procedure for technical review of inclusion of CPAs; x) Records and documentation control process for each CPA under the PoA; y) Measures for continuous improvements of the PoA management system **The PoA DD, version 2, does not demonstrate the above requirements.**		
CL 1 The project proponent proposes to distribute improved cook stoves that use charcoal and other types that use wood fuel. If improved wood fuel stoves (Envirofit) replace low efficiency wood fuel stoves (three stone), then it results in lower emissions. However, if the household switches from a low efficiency wood fuel stove (three stone) to an improved charcoal stove, then this might result in higher	The project decides to establish a baseline at the PoA level to be used only against the implementation of wood fuelled ICS. The project will establish baselines at the CPA level for improved charcoal stoves. Baselines will take into account users that switch from wood to charcoal.	The project proposes to distribute only wood fuel stoves as part of this project activity. **CL 1 is closed**

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
emissions. It was observed during the site visit that most of the households have more than one cook stove, wood fuel stove, charcoal stove and improved cook stove. The project proponent needs to describe how they will identify the cook stove that is being replaced in the project activity. The project proponent needs to have a monitoring plan to identify charcoal stoves replacing wood fuel stoves. The project proponent shall also implement a procedure to take these emissions into account.		
CL 2 The FAO report submitted to DNV http://www.fao.org/DOCREP/004/AC427E/AC427E05.htm provides information on plantations including timber, pine, cypress, eucalyptus etc. The project proponent shall describe why these plantations have not been taken into account in the estimation of the DRB value.	Done. See updated NRB study.	Revised to the fNRB default value 0.82 **CL 2 is closed**
CL 3 During the site visit, DNV visited the community center where the stakeholder	Done. Short summary of the project has been delivered in the local language.	A short summary has been provided in the local language to the community center.

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
consultation was carried out. DNV observed that the information about the project was provided to the locals. However, this information was very technical and in detail. The information was given in English. The sub-county chief has to explain about the project to the locals every time they need to know about the project. A short summary of the project should be made available in the local language.		**CL 3 is closed.**
CL 4 The date and version number of the PoA DD and CPA DD have to be updated.	Updated the date and version number of the PoA-DD and CPA-DD.	**CL 4 is closed**
CL 5 Standard, "Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities", version 03.0 Paragraph 16, b) Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo); The CPA is exclusively bound to the PoA. Confirmation that the programme activity has not been and will not be registered either as a single CDM project activity or as a CPA under another PoA. The PoA-DD does not have a requirement to	Eligibility criteria #3 has been updated to include cross-checks against UNFCCC, Gold Standard, and Voluntary Carbon Standard websites to further ensure no double counting.	The eligibility requirements meet the latest PoA standard requirements **CL 5 is closed**

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
check against other voluntary programs other than CDM. There is currently a GS cook stove distribution project activity in Uganda.		
CL 6 The references to the standards, guidelines and procedures have not been provided using the name of standard and version number and many of the references are out dated. A list of such references has been given below. However, the incorrect references are not limited to the below list: Section B, B.1 (ii) to EB55 Annex 38 Section A, Management system Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies for Programme of Activities (Version 02.1, EB 70 Annex 05) Section B.7.2 sampling approaches may be used in accordance with EB 69 Annex 05 sampling efforts for small-scale project activities (according to EB 69 Annex 4) Section B.2 **EB68 Annex 27 "Additionality Guidelines of Small-Scale Projects"**	The following have been updated: Standard for Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies for Programme of Activities (Version 0.30, EB 74 Annex 05) • Old: (Version 02.1, EB 70 Annex 05) Standard for Sampling and surveys for CDM project activities and programmes of activities (Version 0.40 EB74 Annex 06) • Old: EB65 Annex 2 Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities (Version 03.0 EB 75 Annex 8). • Old: (Version 0.30 EB67 Annex6) • *Note, Formerly known as Best practice examples focusing on sample size and reliability calculations Guidelines on assessment of debundling for SSC project activities" (EB 54, Annex 13, par. 10) Procedures for Registration of a Programme of Activities as a Single CDM Project Activity and Issuance of Certified Emission Reductions for a Programme of Activities(v.4.1) (EB 55, Annex 38)	The PoA-DD has been updated to reference the standards, guidelines and procedures **CL 6 is closed**

Draft report clarifications and corrective action requests by validation team	Summary of project owner response	Validation team conclusion
	Guidelines on the demonstration of additionality of small-scale project activities EB68 Annex27, V9 Clean development mechanism project standard (EB65 Annex 5 V02.1)	

Table 4 Forward action requests

Forward action request	Reference to Table 2
FAR 1 At the time of verification the DOE needs to verify that the improved cook stoves that are part of this PoA emission reduction calculation were only disseminated within the country of Uganda.	A.1
FAR 2 The logo and the unique id will be imprinted on the ICS that is distributed as part of this PoA. The stoves be distributed after the CPA inclusion and hence the logo and unique id will have to be verified at the time of CPA inclusion and verification.	A.2
FAR 3 The PP will cross-check the CPA with other CPAs in this PoA and with CPAs in any other PoA or in a CDM project activity operating in the country using the UNFCCC, the Gold Standard, and other relevant voluntary schemes to ensure that the CPA is not included in any other PoA, CDM project activity or voluntary project activity. All of this information will be summarized in a report and provided to the DOE upon verification. To ensure that the CME and CPA implementer are not double counting the CERs across PoAs or CPAs, the DOE needs to verify that the CME has conducted a cross check with other PoAs or CPAs.	B.3
FAR 4 The start date of the CPA will need to be verified at the time of the CPA verification, since the stoves have not been disseminated as yet. The start date of the CPA will be demonstrated using the sales receipt that will have the date of purchase, and the DOE can review the database to confirm the earliest date of a sale of a stove.	D.1

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APPENDIX B

PROTOCOL FOR ASSESSING COMPLIANCE OF SPECIFIC CPA WITH POA REQUIREMENTS

Checklist Question					
A Description of CPA (PS § 31, VVS § 62-63, § 189)					
A.1. Title, Technical description of CPA and Parties involved					
A.1.1 Does section A.1 of the CPA-DD include a clearly identifiable CPA title, version number of the CPA-DD and date of the CPA-DD?			☐ Clearly identifiable title of the CPA ☐ Version number of the CPA-DD is included ☐ Date of the CPA-DD is included.		
A.1.2 Is the CPA-DD is in accordance with the applicable requirements for completing CPA-DDs?					
4.17.9 A.1.3 Does the description of the CPA sufficiently cover all relevant elements, is accurate and does it provides the reader with a clear understanding of the nature of the proposed CPA?					
4.17.10 A.1.4 Does the CPA-DD provide information on the CPA implementer(s)? CPA implementers can be project participants of the PoA, under which the CPA is submitted, provided the name is included in the registered PoA.					
4.17.11 A.1.5 Does the CPA-DD describe all the technologies and/or measures to be employed and/or implemented by the CPA including a list of the facilities, systems and equipment that will be installed and/or modified by the CPA					
4.17.12 A.1.6 Does the CPA-DD adequately list all Party(ies) and CPA implementer(s) involved in the CPA and provide contact information in Appendix 1? Are all listed Party(ies) and CPA implementer(s) included in the PoA?					
4.17.13 A.1.7 Does the CPA-DD provide geographic reference or other means of identification that allows for the unique identification of the CPA?					
A.2. Duration of the CPA and crediting period					
4.17.14 A.2.1 Is the CPA starting date clearly defined and					

Checklist Question					
evidenced? Is the start date of the CPA the earliest date at which either the implementation or construction or real action of the CPA begins? Is the start date on or after the start date of the PoA?					
4.17.15 A.2.2 Is the CPA operational lifetime clearly defined and evidenced?					
4.17.16 A.2.3 Has the crediting period been clearly defined and is the start of the crediting period deemed to be reasonable?					
4.17.17 A.2.4 Has it been confirmed that the length of the CPA crediting period does not exceed the end of PoA?					
A.3. Estimated amount of emission reductions from the CPA					
4.17.18 A.3.1 Has the emission reduction forecast been checked and is it deemed likely that the stated amount is achieved given that the underlying assumptions do not change?					
A.4. Public funding					
4.17.19 A.4.1 In case public funding from Parties included in Annex I is used for the CPA, have these Parties provided an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of these Parties?					
A.5. Confirmation for CPA					
4.17.20 A.5.1 Has a confirmation been provided that the CPA is neither registered as an individual CDM project activity nor is part of another registered PoA?					

Checklist Question					
B Environmental impacts (PS § 63-64, VVS § 134-135) *It is assessed whether environmental impacts of the CPA have been properly addressed.*					
D.1.2. Has an analysis of the environmental impacts of the CPA been sufficiently described?					
D.1.3. Are there any Host Party requirements for an Environmental Impact Assessment (EIA)?					
D.1.4. Will the programme create any adverse environmental effects?					
D.1.5. Are transboundary environmental impacts considered in the analysis?					
D.1.6. Have identified environmental impacts been addressed in the programme design?					
D.1.7. Does the programme comply with environmental legislation in the host country?					
C Stakeholders' comments (PS § 65-69, VVS § 138-140) *It is assessed whether stakeholders have been properly consulted in the development of the CPA.*					
C.1.1. Have relevant stakeholders been consulted?					
C.1.2. Have appropriate media been used to invite comments by local stakeholders?					
C.1.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?					
C.1.4. Is a summary of the stakeholder comments received provided?					

Checklist Question					
C.1.5. Has due account been taken of any stakeholder comments received?					
D Application of a baseline and monitoring methodology(ies)					
D.1. Title and reference of the approved baseline and monitoring methodology(ies) selected					
D.1.2. Are the exact title and version of approved methodology(ies) and tools listed?					
D.2. Applicability of methodology (and tools) (VVS § 73-77) **4.18 The applicability of the methodology is checked through the eligibility criteria specifying the conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs**					
D.3.2. Do the eligibility criteria in D.5 below, in particular the eligibility criteria specifying the conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by the CPA, sufficiently demonstrate that the CPA complies with the applicability criteria of the applied methodology (and tools)? If not, provide below and assessment of the CPAs compliance with the applicability criteria.					
D.3. Project boundary of CPA (VVS § 82-87)					
D.3.1. What is the CPA's system boundaries (components and facilities used to mitigate GHGs)? Are they clearly defined and in accordance with the methodology?					

Checklist Question					
D.3.2. Is the CPA located within the geographical boundary of the proposed or registered PoA?					
D.3.3. Which GHG sources are identified for the CPA? Does the identified boundary cover all possible sources linked to the CPA? Give reference to documents considered to arrive at this conclusion.					
D.3.4. Does the CPA involve other emissions sources not foreseen by the methodologies that may question the applicability of the methodology? Do these sources contribute with more than 1% of the estimated emission reductions of the CPA?					
D.4. Baseline scenario determination and description (VVS § 88-95 / Identification of alternatives to the project activity (VVS § 113-116) *Ensure that the evaluation of all alternatives provided and required by the methodology and also possible alternatives/offshoots of alternatives are discussed. If baseline alternatives required to be considered by the methodology are considered not applicable, please assess the justification for this*					
D.4.1. Which baseline scenarios have been identified? Is the list of baseline scenarios complete? Does the list include as one of the options that the CPA is undertaken without being registered as a proposed CPA? Does the list contains all plausible alternatives which are viable means of supplying the comparable outputs or services that are to be supplied by the proposed CPA?					
D.4.2. Could the project activity in absence of the CDM or other baseline alternatives also be implemented by other entities than the CDM project participants? If so, has this also been included in the list of baseline scenarios?					

Checklist Question					
D.4.3. How have the other baseline scenarios been eliminated in order to determine the baseline?					
D.4.4. What is the baseline scenario?					
D.4.5. Is the determination of the baseline scenario in accordance with the guidance in the methodology?					
D.4.6. Has the baseline scenario been determined using conservative assumptions where possible?					
D.4.7. Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies? Does the baseline scenario comply with all applicable and enforced legislation?					
D.4.8. Is the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced?					
D.4.9. Is the baseline determination adequately documented in the CPA-DD? • All assumptions and data used by the project participants are listed in the CPA-DD and related document to be submitted for registration. The data are properly referenced. • All documentation is relevant as well as correctly quoted and interpreted. • Assumptions and data can be deemed reasonable • Relevant national and/or sectoral policies and circumstances are considered and listed in the CPA-DD. • The methodology has been correctly applied to identify what would occurred in the absence of the proposed CPA					
D.5. Demonstration of eligibility for the CPA					
D.5.1. Has it been sufficiently justified that the CPA					

Checklist Question					
complies with Eligibility criteria 1 - The CPA is located within Uganda. Please note that not all ICS installations may have been deployed at the CPA inclusion stage, however the location of the ICS can also be checked during verification. In the event that any deployed ICS is found to be outside of the project boundary/location, those ICS will not be counted in the emission reduction calculation.					
D.5.2. Has it been sufficiently justified that the CPA complies with Eligibility criteria 2 - A unique numbering or identification system for the ICS installed is applied. This shall ensure no double counting of stoves within the PoA and ensure that stoves can be identified as belonging to this PoA and not to a PoA managed by any other CME. Please note that not all ICS installations may have been deployed at the CPA inclusion stage, however the ICS' unique numbering can also be checked during verification. In the event that any deployed ICS is found not to be in line with CPA double counting criteria, those ICS will not be counted in the emission reduction calculation.					
D.5.3. Has it been sufficiently justified that the CPA complies with Eligibility criteria 3 - The CPA is exclusively bound to the PoA. The CPA shall not be proposed as an individual CDM project and/or as a part of any other CDM PoA and/or any other mechanism to avail climate change mitigation benefits. A statement shall be included in the CPA-DD that the specific CPA will not be part of another single CDM project activity or CPA under another PoA and confirmed by the Partner Organization (PO) implementing the CPA.					
D.5.4. Has it been sufficiently justified that the CPA complies with Eligibility criteria 4 - Contractual provisions to ensure that those operating the CPA are aware and have agreed that their activity is being subscribed to the PoA. In					

Checklist Question					
the case that the CME is not responsible for implementing the CPA, the organization responsible for CPA implementation has signed a contractual agreement with the CME to participate in the PoA. This agreement: 1) Defines the ownership of the carbon emission reduction rights, 2) Covers the distribution and monitoring related responsibilities of the parties involved, 3) Confirms that the ICS to be distributed under the CPA have not and will not be distributed under any other carbon project (CDM project, PoA or voluntary carbon market project) 4) Cedes the rights to the carbon credits generated from CPAs under the PoA to the CME.					
D.5.5. Has it been sufficiently justified that the CPA complies with Eligibility criteria 5 - The CME and the CPA operator (in case of being different from the CME) shall confirm that there is no public funding or in the case of public funding, the annex I party will confirm that funding is not a diversion of Official Development Assistance.					
D.5.6. Has it been sufficiently justified that the CPA complies with Eligibility criteria 6 - CPA start date shall not be before PoA validation start date (i.e. not prior to webhosting date for global stakeholder consultation). Please note that not all ICS installations may have been deployed at the CPA inclusion stage, however the ICS start date can also be checked during verification. In the event that any deployed ICS are found not to be in line with CPA start date, those ICS will not be counted in the emission reduction calculation.					
D.5.7. Has it been sufficiently justified that the CPA complies with Eligibility criteria 7 - CPA crediting period not to exceed the PoA end date and the start date of the crediting period of a CPA shall be on or after:(i) The date of registration of the PoA, if the corresponding CPA-DD is					

Checklist Question					
submitted together with the request for registration; (ii) The date when the CPA was included in accordance with the Project cycle procedure;					
D.5.8. Has it been sufficiently justified that the CPA complies with Eligibility criteria 8 - CME approved each CPA to be included into its registered PoA.					
D.5.9. Has it been sufficiently justified that the CPA complies with Eligibility criteria 9 - The CPA consists of replacement of conventional firewood cookstoves for biomass fired ICS as defined in section A.6 of the PoA-DD. Conventional stoves replaced will be any of the types identified by each baseline scenario and as applied by the specific CPA. Stove types replaced and implemented will be defined in the CPA-DD, and hence appliances involving the efficiency improvements in the thermal applications of non-renewable biomass as per AMS II. G, ver. 5. Please note that not all ICS may have been deployed at CPA inclusion stage, the 'type and number of ICS deployed' will however also be checked during verification, and in case any deployed ICS type will be found not in line with the methodology requirement, those ICS will not be counted for emission reduction calculation.					
D.5.10. Has it been sufficiently justified that the CPA complies with Eligibility criteria 10 - The ICS disseminated under the CPA will be single pot, multi pot or in-situ cookstoves that have a specified efficiency of at least 20% at the time of CPA inclusion.					
D.5.11. Has it been sufficiently justified that the CPA complies with Eligibility criteria 11 - Only ICS of the types below will be disseminated: Biomass fuelled ICS, Newly operational ICS and either fix/portable operation. Other requirements (i.e type, maximum capacity, size or					

Checklist Question					
dimensions, fuel type, single or multi-pot and efficiency) are defined in the relevant eligibility criteria within this table. Please note that not all ICS may have been deployed at CPA inclusion stage, the technical requirement will however also be checked during verification, and in case any deployed ICS type will be found not to be in line with the technical requirement, those ICS will not be counted for emission reduction calculation. The cook stove technologies will also meet minimum criteria as outlined below: 1) Stove Type and Model will be identified and shall include whether the stove is a single or multi-pot unit.2) Thermal efficiency shall be equal to or greater than 20% 3) The maximum capacity shall ensure that the nominal annual energy savings of each ICS is lower than 5% of the applicable limit for Type II small scale CDM project activities i.e. of 180 GWhth 4) Stove size or dimensions will be provided 5) Primary fuel type will be specified to be charcoal or wood					
D.5.12. Has it been sufficiently justified that the CPA complies with Eligibility criteria 12 - In accordance with methodology AMS-II.G: Project participants are able to show that non-renewable biomass has been used since 31 December 1989, using survey methods					
D.5.13. Has it been sufficiently justified that the CPA complies with Eligibility criteria 13 - In accordance with "Guidance for determining the occurrence of de-bundling under a Programme of Activities (PoA)", if each independent subsystem/ measures included in the CPA of a PoA is no greater than 1% of the small scale threshold defined by the methodology applied, than that CPA of PoA is exempted from performing de-bundling check, i.e. considered as being not a de-bundled component of a large scale activity.					
D.5.14. Has it been sufficiently justified that the CPA complies with Eligibility criteria 14 - The CPA will remain					

Checklist Question					
under the thermal threshold of 180 GWh_{th}/a thermal energy savings (threshold as per clarification request SSC_233) throughout the crediting period of the CPA. Furthermore, the aggregate energy savings of a single project activity shall not exceed the equivalent of 60 GWh per year or 180 GWh thermal per year in fuel input. If a CPA exceeds the applicable limit in any year, the claimable emission reduction shall be capped based on the estimated GHG reductions in the CPA-DD. Please note that not all ICS may have been deployed at CPA inclusion stage, the SSC limit for CPAs can however also be checked during verification, and in case any deployed ICS will be found not in line with CPA SSC Limit for CPAs requirement, those ICS will not be counted for emission reduction calculation.					
D.5.15. Has it been sufficiently justified that the CPA complies with Eligibility criteria 15 - Additionality of CPA shall be confirmed in line with the Requirements of "Guidelines for demonstrating additionality of small-scale project activities" as described in Section B.1. of this CDM PoA DD. In each SSC-CPA-DD, it shall be demonstrated that: 1) The nominal annual energy savings of each ICS is lower than 5% of the applicable limit for Type II small scale CDM project activities i.e. of 180 GWhth, 2) In each SSC-CPA-DD, it shall be demonstrated that the number of ICS to be distributed in a given CPA multiplied by the nominal energy savings of each ICS in a given CPA per annum is lower than the applicable limit for Type II small scale CDM project activities i.e. of 180 GWhth, 3) The project activities are solely composed of isolated units where the users of the technology/measure are households or communities or Small and Medium Enterprises (SMEs)					
D.5.16. Has it been sufficiently justified that the CPA complies with Eligibility criteria 16 - Each CPA will ensure					

Checklist Question					
compliance with the applicability of the methodology and its requirements. Conditions of the applicability of the methodology and its requirements are demonstrated at the PoA level through the assessment of "application of the methodology" in section B.3.					
D.5.17. Target groups have been established by means of the baseline at the PoA level, as described in Appendix 3 of the PoA-DD. In summary, eligible target groups are any of the following: 1) Non-institutional biomass users 2) Institutional biomass users. Assumptions made at the PoA level for any scope regarding these target groups are deemed valid through all CPAs (i.e. baseline studies, ER calculation, monitoring plan).					
D.5.18. Has it been sufficiently justified that the CPA complies with Eligibility criteria 18 - Distribution mechanisms have been established in the PoA-DD by means of the "General operating and implementing framework of PoA" at the PoA level.					
D.5.19. Has it been sufficiently justified that the CPA complies with Eligibility criteria 19 - The Local Stakeholder Consultation is established at the PoA level as described in the PoA-DD. No further actions needed at the CPA level to satisfy the eligibility criteria.					
D.5.20. Has it been sufficiently justified that the CPA complies with Eligibility criteria 20 - The EIA is established at the PoA level as described in the PoA-DD. No further actions needed at the CPA level to satisfy the eligibility criteria.					
D.5.21. Has it been sufficiently justified that the CPA complies with Eligibility criteria 21- Sampling of appliances within the CPA must meet the requirements of AMS-II.G v.5 and the "Standard on Sampling and Surveys for CDM					

Checklist Question					
Projects and Programmes of Activities" (the Sampling Standard). Each CPA will ensure compliance with the framework established for sampling requirements for quantification of parameters not established at the ex-ante and monitoring tasks during the crediting period. Conditions and its requirements are outlined for baselines and the monitoring tasks at the PoA-DD.					
D.5.22. Has it been sufficiently justified that the CPA complies with Eligibility criteria 22: Each CPA shall demonstrate how the baseline parameters for baselines not established at the PoA level (that applies for institutional baselines not applicable at the first CPA at the time of PoA registration) that are to be calculated at the CPA level have been determined. Parameters to be monitored are listed in the CPA-DD					
D.6. Algorithms and/or formulae used to determine emission reductions of the CPA (VVS § 96-100)					
Data and parameters that are available at validation and that are not monitored					
D.6.1. How was the insert parameter available at validation verified?					
D.6.2. How was the insert parameter available at validation verified?					
D.6.3. How was the insert parameter available at validation verified?					
D.6.4. How was the insert parameter available at validation verified?					
D.6.5. How was the insert parameter available at validation verified?					
D.6.6. How was the insert parameter available at validation verified?					

Checklist Question					
D.6.7. How was the insert parameter available at validation verified?					
D.6.8. In case any of the parameters above were determined based on sampling, was the sample adequate and did it comply with the specific guidance in the applicable methodology or, if no such guidance is available in methodology, did it achieve a 90/10 confidence/precision as the criteria for reliability of sampling efforts for small-scale project activities and 95/10 for large scale project activities?					
Baseline emissions					
D.6.9. Are the calculations documented according to the approved methodology and tool and in a complete and transparent manner?					
D.6.10. Have conservative assumptions been used when calculating the baseline emissions?					
D.6.11. Are uncertainties in the baseline emission estimates properly addressed?					
D.6.12. If the calculations of baseline emissions are based on sampling, does this comply with the Standard for sampling and surveys?					
Project emissions					
D.6.13. Are the calculations documented according to the approved methodology and tool and in a complete and transparent manner?					
D.6.14. Have conservative assumptions been used when calculating the project emissions?					
D.6.15. Are uncertainties in the project emission estimates properly addressed?					
D.6.16. If the calculations of project emissions are based on sampling, does this comply with the Standard for sampling and surveys?					

Checklist Question					
Leakage					
D.6.17. Are the leakage calculations documented according to the approved methodology and in a complete and transparent manner?					
D.6.18. Have conservative assumptions been used when calculating the leakage emissions?					
D.6.19. Are uncertainties in the leakage emission estimates properly addressed?					
D.6.20. If the calculations of leakage emissions are based on sampling, does this comply with the Standard for sampling and surveys					
Emission Reductions					
D.6.21. Algorithms and/or formulae used to determine emission reductions: • All assumptions and data used by the project participants are listed in the CPA-DD and related document submitted for registration. The data are properly referenced • All documentation is correctly quoted and interpreted. • All values used can be deemed reasonable in the context of the CPA • The methodology has been correctly applied to calculate the emission reductions and this can be replicated by the data provided in the PoA-DD and supporting files to be submitted for registration.					
D.7. Monitoring plan (VVS § 131-133)					
Data and parameters monitored					
D.7.1. Do the means of monitoring described in the plan comply with the requirements of the methodology?					
D.7.2. Does the monitoring plan contains all necessary parameters, and are they clearly described?					

Checklist Question					
D.7.3. In case parameters are measured, is the measurement equipment described? Describe each relevant parameter.					
D.7.4. In case parameters are measured, is the measurement accuracy addressed and deemed appropriate? Describe each relevant parameter.					
D.7.5. In case parameters are measured, are the requirements for maintenance and calibration of measurement equipment described and deemed appropriate? Describe each relevant parameter.					
D.7.6. Is the monitoring frequency adequate for all monitoring parameters? Describe each parameter.					
D.7.7. In case any of the parameters will be determined based on sampling, is the sample plan adequate and does it comply with the specific guidance in the applicable methodology or, if no such guidance is available in methodology, does it achieve a 90/10 confidence/precision as the criteria for reliability of sampling efforts for small-scale project activities and 95/10 for large scale project activities?					
Ability of project participants to implement monitoring plan					
D.7.8. How has it been assessed that the monitoring arrangements described in the monitoring plan are feasible within the CPA design?					
D.7.9. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)?					
D.7.10. Are the data management and quality assurance and quality control procedures sufficient to ensure that the emission reductions achieved by/resulting from the CPA can be reported ex post and verified?					
D.7.11. Will all monitored data required for					

Checklist Question					
verification and issuance be kept for two years after the end of the crediting period or the last issuance of CERs, for this CPA, whichever occurs later?					
Monitoring of sustainable development indicators/ environmental impacts					
D.7.12. Is the monitoring of sustainable development indicators/ environmental impacts warranted by legislation in the host country?					
D.7.13. Does the monitoring plan provide for the collection and archiving of relevant data concerning environmental, social and economic impacts?					
D.7.14. Are the sustainable development indicators in line with stated national priorities in the host country?					

APPENDIX C

CURRICULA VITAE OF THE VALIDATION TEAM MEMBERS

Misheck Chomba Kapambwe
Dr Kapambwe holds a PhD in Carbon Accounting (forest products) and has done a Masters Degree in Wood Science, Graduate Diploma in Forest Industries, Diploma in Forestry and Diploma in Sawmilling Technology and has done short term courses in Carbon Accounting and Management. Having an overall experience of around twenty years in forestry and forest products industry. Prior to joining DNV having around five years of experience in research in the areas of greenhouse accounting (including ecological footprinting) and climate change policy. His experience also covers the fields of AFOLU project and methodology validation, forest products processing, environmental management and resource conservation in developing countries (including Africa) and Australia.
His qualification, industrial experience and experience in forestry and forest industry demonstrate his sufficient sectoral competence in forestry.

Shruthi Poonacha Bachamanda
Shruthi holds a bachelor in Environmental Engineering and Masters in Environmental Resource Management. She has 6 years of experience in validation and verification of numerous GHG emission projects and inventory in DNV, both in USA and other countries. The GHG emission projects and inventory include various types, such as, CDM, VCS, CAR, CARB and CCAR.

Weidong Yang
Mr. Yang holds a Master's Degree in Chemical Engineering and has studied MBA in general management, with an overall experience of around 20 years. Prior to joining DNV he had around 4 years experience in chemical process industry covering technology, production, and quality control. He worked in research institute of pharmaceutical industry for about 8 years. His experience also covers the fields of quality management, environmental management and health & safety management. He has also been an IRCA registered lead auditor of management systems such as ISO 9001, ISO 140001 and OHSAS 18001 standards for various industrial sectors, including chemical process industry for 6 years.
He has experience of around 4 years in validation and verification of numerous GHG emission projects and inventory in DNV, both in China and other countries. The GHG emission projects and inventory include various types, such as, CDM, VCS, CAR and CCAR.
His qualification, industrial experience and experience in CDM demonstrate his sufficient sectoral competence in chemical process.

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