




**Validation report form for
CDM programme of activities
(Version 02.0)**

Complete this form in accordance with the instructions attached at the end of this form.

BASIC INFORMATION

Title of the programme of activities (PoA)	Improved Cooking Stoves Programme in Burundi supported by Republic of Korea
Version number of the validation report	1.0
Completion date of the validation report	20/03/2019
Version number of PoA-DD to which this validation report applies	1.2
Date when PoA-DD was uploaded for global stakeholder consultation	26/11/2018
Coordinating/managing entity (CME)	ECOEYE CO., LTD.
Host Parties	Burundi
Applied methodologies and standardized baselines	AMS-II.G. "Energy efficiency measures in thermal applications of non-renewable biomass" Version 10.0
Mandatory sectoral scopes linked to the applied methodologies	3
Conditional sectoral scopes linked to the applied methodologies, if applicable	N/A
Name and UNFCCC reference number of the DOE	TÜV NORD CERT GmbH UNFCCC Ref. No.: E-0022
Name, position and signature of the approver of the validation report	 Stefan Winter Final Approver

SECTION A.Executive summary

ECOEYE CO., LTD. has commissioned the TÜV NORD JI/CDM Certification Program (CP) to validate the Programme of Activities:

“Improved Cooking Stoves Programme in Burundi supported by Republic of Korea”

with regard to the relevant requirements of the UNFCCC for CDM project activities, as well as criteria for consistent project operations, monitoring and reporting. UNFCCC criteria include article 12 of the Kyoto Protocol, the modalities and procedures for CDM (Marrakech Accords) and the relevant decisions by COP/MOP and CDM Executive Board.

The objective of the validation is the review by an independent entity whether the project is compliant with the applicable sections of:

- the CDM project standard for programmes of activities_v2.0,
- the CDM cycle procedure for programmes of activities_v2.0,
- the updated applied UNFCCC Methodology AMS-II.G. “Energy efficiency measures in thermal applications of non-renewable biomass” Version 10.0, as well as applicable tools and guidelines.

As per the requirements of the CDM validation and verification standard for programmes of activities (version 02.0)^{VVS/} the validation is based on

- the PoA-DD^{PoA-DD/},
- further supporting documents made available to the validator,
- information collected through performing interviews and during the on-site assessment (if applicable).
- The impact of new relevant national and/or sectoral policies and circumstances on the original baseline

Furthermore publicly available information, such as the host country legislation, was considered as far as available and required.

The PoA aims to reduce of greenhouse gases (GHG) by facilitating the production and installation of a large number of Improved Cooking Stoves (ICSs) replacing inefficient cooking devices. The PoA encompasses Component Project Activities within the Burundi territory, which will manufacture, distribute and install affordable Improved Cooking Stoves (ICSs) to replace inefficient cook-stoves at a household level.

The following parties to the Kyoto Protocol, CME and project participants are involved in this project activity (Table A-1):

Table A-1: Project Party, CME and Project Participant of PoA

Characteristic	Party	Project Participants	CME
Non-Annex 1 Country	Republic of Burundi (host Party)	ECOEYE CO., LTD.	x
Non-Annex 1 Country	Republic of Burundi (host Party)	Observatoire de l'Environnement et de la Nature « OBEN »	-

SECTION B. Validation team, technical reviewer and approver**B.1. Validation team members**

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader	EI	Kochaniewicz	Grzegorz	-	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

B.2. Technical reviewer and approver of the validation report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical Reviewer	EI	Lubanga	David	-
2.	Approver	IR	Winter	Stefan	TÜV NORD CERT GmbH

SECTION C. Means of validation**C.1. Desk/document review**

>>

During the desk review all documents initially provided by the client and publicly available documents relevant for the validation were reviewed. The main documents are listed below:

- the PoA-DD using the valid version of the applicable PoA-DD FORM^{PoA-DD/},
- documents of CDM prior consideration and starting date/PCF/;
- regulations of project activity/EEIA/;
- technical details of the project/SPEC/;
- host government approval/LoA/;

Other supporting documents, such as publicly available information on the UNFCCC website and background information were also reviewed.

C.2.On-site inspection

Onsite inspection was not conducted in line with PoA- VVS ver 2 §183. VT conducted interviews with person as per below via telephone and document check of provided information.

Duration of on-site inspection: DD/MM/YYYY to DD/MM/YYYY				
No.	Activity performed on-site	Site location	Date	Team member
1.	N/A			

C.3.Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Dunod	Alexandre	Consultant ^{/IM01/}	14/11/2018	General aspects of the PoA	Grzegorz Kochaniewicz
2.	Rwemera	Pascal	OBEN (project implementer) ^{/IM01/}	22/11/2018	Project status; National legislation; Requirements for Impact assessment; Requirements for LSC,	Grzegorz Kochaniewicz
3	Nindamutsa	Astere	DNA of Burundi ^{/IM02/}			

C.4.Sampling approach

>>

<input checked="" type="checkbox"/>	No sampling approach has been used by the VT to validate any parameter			
<input type="checkbox"/>	A sampling approach has been applied by the VT for the following parameter(s):			
Parameter	Sampling approach ¹⁾	Sampling Type ²⁾	Population	Sample Size
-	-	-	-	-

¹⁾ Sampling Approaches:

SiRS: Simple Random Sampling
 StRS: Stratified Random Sampling
 SS: Systematic Sampling
 CS: Cluster Sampling
 MSS: Multi-stage Sampling

²⁾ Sampling Types:

PS: Parameter Sampling

C.5.Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised

Areas of validation of compliance	No. of CL	No. of CAR	No. of FAR
Programme of activities	0	0	0
-Identification of the programme type	0	0	0
General description of the PoA	1	0	0
Management system	0	0	0
Demonstration of additionality of the PoA	0	0	0
Start date and duration of the PoA	0	0	0
Environmental impacts	0	0	0
Socio-economic impacts	0	0	0
Local stakeholder consultation	0	0	0
Sustainable development co-benefits	0	0	0
Approval	0	0	0
Authorization	0	0	0
Modalities of communication	0	0	0

Global stakeholder consultation	0	0	0
Generic component project activities	0	0	0
General description of generic CPA	0	0	0
Application and selection of methodologies and standardized baselines	0	1	0
• Application of methodologies and standardized baselines	0	0	0
• Deviation from methodologies and/or methodological tools	0	0	0
• Clarification on applicability of methodology, tool and/or standardized baseline	0	0	0
• Project boundary, sources and GHGs	0	1	0
• Baseline scenario	0	1	0
• Estimation of emission reductions or net anthropogenic removals	0	0	0
• Monitoring plan	0	1	0
Crediting period type and duration	0	0	0
Eligibility criteria for inclusion of CPAs	0	0	0
Others (please specify)	0	0	0
Total	1	4	0

SECTION D.Validation findings

D.1.Programme of activities

D.1.1.Identification of the programme type

Means of validation	<p>The DOE has checked that section A.1 of the PoA-DD has been fully completed as per the requirements of the applied PoA-DD template guidelines.</p> <p>In section H.3, the CME has identified the type of CDM PoA in accordance with §31 of the CDM project standard for programme of activities, version 2.0.</p> <p>The small-scale PoA is Type II. Each CPA will be an energy efficiency improvement project activity</p> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /PoA-DD/ • /VVS/ • /PS/ • /unfccc/ • /LoA/ • /SPEC/ 	
Findings	<input checked="" type="checkbox"/>	The programme type has been properly identified
	<input type="checkbox"/>	<p>The respective requirements have widely been complied with; however; the following issues needed to be addressed in this context:</p> <p>-</p>
Conclusion	<input checked="" type="checkbox"/>	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	<input type="checkbox"/>	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 3.
	<p>The PoA will include only small-scale non-A/R CPAs. Each component project activity will be a Type II project activity as defined in §126 b) of the CDM PoA Standard, version 2.0</p>	

D.1.2.General description of the PoA

Means of validation	<p>The DOE has checked that section A.1 of the PoA-DD has been fully completed as per the applied PoA-DD template guidelines. The stated goal of the voluntary PoA is to provide rural households in Burundi with affordable Improved Cooking Stoves (ICSs). The cook-stoves are more efficient than the traditional cooking devices therefore users save non-renewable wood fuel during cooking leading to greenhouse gas (GHG) emission reductions. The CME, coordinating the efforts of potential CPA implementers to distribute ICSs throughout Burundi, is ECOEYE CO., LTD., and the project implementer from Burundi is Observatoire de l'Environnement et de la Nature « OBEN ».</p> <p>There is neither laws nor regulations in Burundi that require the distribution and use of ICS, therefore the PoA is a voluntary action of the CME.</p> <p>The PoA aims to reduce GHG emissions and contribute to sustainable development in the host countries. There is no public funding involved in this PoA and any public funding at the CPA level shall not constitute diversion of official development assistance (ODA).</p> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /PoA-DD/ • /VVS/ • /PDD-T/ • /unfccc/ • /LoA/ • /SPEC/
Findings	<input checked="" type="checkbox"/> The latest reporting template CDM-PoA-DD-FORM as listed on the UNFCCC website has been used.
	<input checked="" type="checkbox"/> The latest instructions for filling out section A.1 of the PoA-DD have been followed.
	<input checked="" type="checkbox"/> The respective requirements have widely been complied with; however; the following issues needed to be addressed in this context: CL 01
Conclusion	<input type="checkbox"/> No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	<input checked="" type="checkbox"/> The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 3.
	<p>The purpose and general description of the PoA complies with the requirements of the CDM PoA Standard version 2.0</p>

D.1.3.Management system

Means of validation	<p>The management system has been outlined in section B of the PoA-DD. The CME will be responsible for CPA inclusion, monitoring, validation and issuance of emission reductions.</p> <ul style="list-style-type: none"> • The CME has established an operational and management structure, sufficiently defining roles and responsibilities for different parties in line with §36/37 of the CDM project standard for programmes of activities, version 2.0 • Each CPA shall have a unique identification, serial number and will be recorded both in hard copy and electronically, to avoid double-counting • Sampling shall be applied where applicable especially when applying AMS-II.G. Instruction on how to develop a sampling plan for each eligible CPA is described in section I.7.2 of the generic CPA-DD. • A record-keeping system shall be established by the CME to maintain data relating to each CPA • Details of training have also been included <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /IM01/
----------------------------	--

	<ul style="list-style-type: none"> • /PoA-DD/ • /VVS/ • /PS/ • /unfccc/
Findings	-
Conclusion	It can be confirmed that the management system proposed conforms to all requirements of the CDM PoA VVS version 2.0. The roles and responsibilities cover all aspects of implementation and monitoring of CPAs, in order to sufficiently and accurately report on emission reductions at CPA level.

D.1.4.Demonstration of additionality of the PoA

Means of validation	<p>As prescribed in section C of the PoA-DD, additionality shall be demonstrated at CPA level, applying the methodological tool: "TOOL19: Demonstration of additionality of microscale project activities".</p> <p>As per the tool, CPAs shall demonstrate additionality using the following criteria: -</p> <ol style="list-style-type: none"> 1.The PoA and its CPAs are all in a Least Developed Country. 2.The project activity is an energy efficiency activity. 3.The micro-scale CDM units in the CPAs will not achieve more than 600 MWh/year, which is equivalent to 1,800 MWh_{th} of annual energy savings per appliance per year. 4. Targeted end users of the independent subsystems (ICSS) are households/communities <p>For the PoA additionality, the PoA is a voluntary action by the CME. No laws or regulations make it mandatory for the CME to pursue the PoA. According to the Poverty Reduction Strategy Paper II (PRSP II) for 2012–2016, extended to 2018 and anchored in Burundi Vision 2025, referenced in the PoA-DD, promoting development through sustainable environmental and space management' as its 4th pillar, which chief component of (ii) protection of the environment and sustainable resource management. The eligibility criterions under section K of the PoA-DD has been set accordingly</p> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /PoA-DD/ • /VVS/ • /PS/ • /TL19/ • /unfccc/ • /PRS/ 	
Findings	<input checked="" type="checkbox"/>	The additionality of the PoA is adequately demonstrated at PoA level
	<input checked="" type="checkbox"/>	Additionality will also be demonstrated at CPA level
	<input type="checkbox"/>	The respective requirements have widely been complied with; however the following issues needed to be addressed in this context: -
Conclusion	<input type="checkbox"/>	No CARs/CLs have been raised in this context. No correction was required in the context. The project is in line with the respective requirements.
	<input type="checkbox"/>	The raised CARs/CLs have been addressed appropriately. The PP has carried out the requested corrections. All respective findings could be closed out. For details please refer to Appendix 3.
		<p>PoA additionality has been adequately demonstrated in section C of the PoA-DD. The only alternative to the proposed PoA is the continuation of the pre-project scenario.</p> <p>The CPA additionality will be demonstrated at CPA level using the methodological</p>

	<p>"TOOL19: Demonstration of additionality of microscale project activities".</p> <p>Each ICS is defined as a CDM micro-scale unit (independent household based system) within the CPA is exempted from performing a de-bundling check in line with §124 n) of the CDM project standard for programmes of activities, version 2.0, as well as §17 of the methodological tool 19.</p>
--	--

D.1.5.Start date and duration of the PoA

Means of validation	<p>The PoA start date is 09/10/2018, when the CME officially notified the secretariat and the DNA of the host Party of its intention to seek the CDM status. The PoA-DD was not published for global stakeholder consultation (GSCP) yet and will be published on/or after the day of request for registration. Therefore, the earlier date of 09/10/2018 shall be the PoA start date in line with the definition of §40 of the CDM PoA Standard version 2.0.</p> <ul style="list-style-type: none"> -the starting date of the PoA is determined correctly and evidenced -as per EC (d) the starting date of any CPA will be on or after the start date of the PoA -the length of the PoA does not exceed 28 years <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /PoA-DD/ • /VVS/ • /PS/ • /unfccc/ • /GT/
Findings	-
Conclusion	The PoA start date and duration of 28 years (336) months have been correctly defined according to CDM PS and PoA Standard guidelines.

D.1.6.Environmental impacts

Means of validation	<p>The ICS are distributed throughout the country, therefore the environmental impact was assessed on the PoA level. As per the PoA-DD section E, the environmental impact assessment is not required for the project activity. On the DOE and CMA request the Burundi DNA which is the directorate general under the Ministry of Water, Environment, Land management and Urban Planning in charge of hydrology, hydrogeology, water resources assessment, climate monitoring in real time, mapping and survey issues at national level, confirmed that the proposed measures under the PoA are exempted from requirements to conduct Environmental Impact Assessment (Étude d'Impacts Environnementaux).</p> <p>The host country LoA has indicated that the proposed PoA is in line with the national policy on environmental protection.</p> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /PoA-DD/ • /VVS/ • /PS/ • /IM02/ • /unfccc/ • /IM03/ • /DNA/
Findings	-
Conclusion	An EIA process is not required for this project type, in line with host country rules and all applicable requirements of the CDM PoA PS.

D.1.7.Socio-economic impacts

Means of validation	N/A This is non-A/R PoA
Findings	
Conclusion	

D.1.8. Local stakeholder consultation

Means of validation	Not applicable. The Local stakeholder consultation will be conducted at CPA level.
Findings	
Conclusion	

D.1.9. Sustainable development co-benefits

Means of validation	<p>Section A.1 of the PoA-DD includes the policy or stated goal of the PoA, it can be confirmed that the PoA will contribute to sustainable development through providing more efficient energy utilization solutions to the host country rural households, reduction in anthropogenic emissions and ensure healthy lives. The DNA of Burundi has provided a signed letter of approval (LoA) confirming that the proposed PoA will contribute to sustainable development.</p> <p>The following sources of information have been used in this context:</p> <p>/LoA/ /PS/ /VVS/ /PoA-DD/</p>
Findings	-
Conclusion	The DNA of Burundi has provided a letter of approval (LoA) confirming that the proposed PoA will contribute to sustainable development.

D.1.10. Approval

Means of validation	<p>By checking the PoA-DD, and the LoAs the following can be confirmed:</p> <p>The LoA from the host country has been obtained and furnished to the DOE by the CME. The LoA has been signed and stamped by an authorized representative of the DNA. Moreover the DNA of Burundi confirmed the LoA via direct communication with validation team. Therefore, the LoA is authentic and validated in line with the CDM PoA VVS version 2.0.</p> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /PoA-DD/ • /LoA/ • /VVS/ • /PS/ • /unfccc/
Findings	-
Conclusion	<p>It can be confirmed that: -</p> <ul style="list-style-type: none"> - ECOEYE Co., Ltd. and Observatoire de l'Environnement et de la Nature « OBEN » have been authorized by the host party, - Burundi has ratified the Kyoto Protocol, - The PoA is a voluntary undertaking by the CME, - The PoA aids the country in sustainable development, - The letter of approval are unconditional, - The letter refers to precise title of the PoA in the PoA-DD - The letter is authentic and valid for the PoA, - Burundi is the only party involved <p>The LoA fulfill all the stated criteria under the PS and VVS.</p>

D.1.11. Authorization

Means of validation	<p>The LoA from the host country has been obtained and furnished to the DOE by the CME. The LoA has been signed and stamped by representatives of the DNA. Therefore, the LoA is confirmed as authentic</p> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /PoA-DD/ • /LoA/ • /VVS/ • /PS/
----------------------------	--

	<ul style="list-style-type: none"> • /unfccc/ • /IM01/
Findings	-
Conclusion	<p>It can be confirmed that: -</p> <ul style="list-style-type: none"> - ECOEYE Co., Ltd. and Observatoire de l'Environnement et de la Nature « OBEN» have been authorized by the host party - Burundi has ratified the Kyoto Protocol, - The PoA is a voluntary undertaking by the CME, - The PoA aids the country in sustainable development, - The letter of approval are unconditional, - The letter refers to precise title of the PoA in the PoA-DD - The letter is authentic and valid for the PoA, <p>The LoA fulfill all the stated criteria under the PS and VVS. Both the CME and CPA implementer have been authorized by the DNA. There is no separate letter of authorization apart from the LoA.</p>

D.1.12.Modalities of communication

Means of validation	<p>The validation team has directly checked the provided MoC statement in accordance with paragraphs 87/88 of the CDM VVS version 1.0. and §75 guidelines of the CDM PoA PS version 02.0</p> <ul style="list-style-type: none"> ➢ It is confirmed that the title of the PoA is consistent. ➢ The joint signatories are shared between representatives of ECOEYE Co., Ltd. and Observatoire de l'Environnement et de la Nature « OBEN» as primary authorized signatories. ➢ The list of project participants in Section 2 includes CME and CPA implementer. ➢ The MoC incl. Annexes has been correctly completed ➢ The valid version 3.0 of the MoC form (CDM-MOC-FORM) has been used <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /MoC/ • /PS/ • /VVS/
Findings	-
Conclusion	The modalities of communication (MoC) statement has been completed as per all the requirements of §75 of the PoA PS version 02.0

D.1.13.Global stakeholder consultation

Means of validation	<p>A draft PoA design document was submitted to the validation team by the project participants. The DOE has made this report publicly available from 26/11/2018, to begin the validation process and invite stakeholder comments. No comments were received.</p> <ul style="list-style-type: none"> • /PS/ • /VVS/ • /PoA-DD/ • /unfccc/
Findings	-
Conclusion	<p>No comments were received with regard to the proposed PoA yet. The PoA-DD was submitted for GSC together with the request for registration.</p> <p>Therefore, no significant changes have occurred since the documents were uploaded for GSCP. The global stakeholder consultation process has not been yet finalised.</p>

D.2.Generic component project activities

D.2.1.General description of generic CPA

Means of validation	<p>By checking Part II Section H.3 of the generic CPA-DD and the PoA-DD it can be confirmed that</p> <ul style="list-style-type: none"> - The generic CPA-DD has clearly defined the scope of a typical CPA in line with the stated objectives of the proposed PoA.
----------------------------	--

	<ul style="list-style-type: none"> - The technology/measure for the CPA has been clearly described. Only one technology/measure is defined and therefore only one generic CPA-DD is completed - CPAs are regarded to be of the same type if they are similar with regard to the technology or measure, demonstration of additionality, emission reduction calculations and monitoring. The CPAs are considered Type II as defined by the CDM, utilize the same SSC methodology to provide the same technologies and measures to the end-user. - The information provided is consistent with the PoA-DD. - The CPA will be implemented by different entities under the guidance of the CME <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /PoA-DD/ • /PS/ • /VVS/ • /AMSBL/
Findings	-
Conclusion	Section H.3 of the generic CPA-DDs adequately describes a typical specific-case Type II CPA under the PoA. The description of the generic CPAs in the PoA-DD is accurate, complete, and provides an understanding of the generic CPA

D.2.2.Application and selection of methodologies and standardized baselines

D.2.2.1.Application of methodologies and standardized baselines

Means of validation	<p>By checking section I.2 of each generic CPA-DD, it can be confirmed that the CPAs under the PoA will comply with the applicability conditions of the applied methodology AMS-II.G “Energy efficiency measures in thermal applications of non-renewable biomass”, Version 10.0, as follows:-</p> <ul style="list-style-type: none"> • Each CPA will comply with all the methodology applicability conditions but satisfying the applicable small-scale thresholds throughout the crediting period. • The applied methodology version is valid and available on the UNFCCC website. • Each CPA applies the methodological tools referred to in the applied methodology. • The installed project ICSs will be new • Each CPA will apply only one methodology and one measure. Therefore, there are no cross-effects. <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /PoA-DD/ • /IM01/ • /AMSBL/ • /unfccc/
Findings	CAR1 (pls refer to Appendix 4 for more information)
Conclusion	The validation team has analysed all applicability conditions in the methodology against the proposed technologies, measure, design, and scope of the generic CPA-DD. CPAs will meet all applicability and eligibility conditions of the CDM methodology and standardized baseline.

D.2.2.2.Deviation from methodologies and/or methodological tools

Means of validation	<p>No deviation from the selected methodologies has been applied or approved by the Board for the proposed PoA.</p> <p>The following sources of information have been used in this context:</p> <ul style="list-style-type: none"> • /PoA-DD/ • /IM01/ • /AMSBL/ • /unfccc/
Findings	-
Conclusion	Not applicable No deviation has been applied or approved

D.2.2.3. Clarification on applicability of methodology, tool and/or standardized baseline

Means of validation	There has been no clarification on the applicability of the selected methodology, standardized baseline or tools approved by the Board for the proposed PoA The following sources of information have been used in this context: <ul style="list-style-type: none"> • /PoA-DD/ • /IM01/ • /AMSBL/ • /unfccc/
Findings	-
Conclusion	No clarification on applicability of the applied methodology or tools has been issued.

D.2.2.4. Project boundary, sources and GHGs

Means of validation	By checking section A.2 of the PoA-DD, and section I.4 of the generic CPA-DD, and comparing it to the applied methodology and with similar CDM projects the validation team confirms that the project boundary and the sources of GHG emissions included in the generic CPA boundary for the purpose of calculating project emissions and baseline emissions have been correctly included. The applicable national regulations were also assessed via direct communication with DNA of Burundi. The following sources of information have been used in this context: <ul style="list-style-type: none"> • /PoA-DD/ • /AMSBL/ • /unfccc/ • /EEIA/ • /PRS/
Findings	-
Conclusion	The PoA's spatial boundary (geographical) within which all CPAs included in the PoA will be implemented is clearly defined by the methodology. All sources and GHGs included in the CPA boundary are as required in the applicable methodology.

D.2.2.5. Baseline scenario

Means of validation	In accordance with CDM PoA VVS §195, the baseline scenario of the generic CPA has been assessed. Section I.5 has been checked according to the requirements of the applicable methodology and standardised baseline. The baseline scenario as described in section I.5 of the generic CPA-DD is the projected use of fossil fuels to meet similar thermal energy needs as those provided by the project devices. Typically, baseline devices are devices with no improved combustion air supply or flue gas ventilation that is without a grate or a chimney. The fuel consumption factor of the baseline technology B_{214,HH} was assessed and shall be adopted for each real-case CPA. The following sources of information have been used in this context: /PoA-DD/ /AMSBL/
Findings	CAR 02; CAR 04 (pls refer to Appendix 4 for more information)
Conclusion	The baseline scenario for the generic CPA has been correctly defined as per the methodology. No laws or regulations in the host country require the use of more efficient ICSs

D.2.2.6. Estimation of emission reductions or net anthropogenic removals

Means of validation	Section I.6.1 of the generic CPA-DD has been checked and compared with the prescribed methodological options in AMS-II.G, version 10. <ul style="list-style-type: none"> - the equations are correctly applied according to the approved methodologies. - all data sources and assumptions are appropriate and parameters which remain fixed throughout the crediting period are correct and applicable to the project and will lead to a conservative estimation of emission reductions
----------------------------	--

Total emission reductions are calculated according to the equations provided by paragraph 22 of the applied methodology:

$$ER_y = \sum_i \sum_j ER_{y,i,j} - LE_y$$

Where:

i = Indices for the situation where more than one type of project device is introduced to replace the pre-project devices

j = Indices for the situation where there is more than one batch of project device

ER_y = Emission reductions during year y in t CO₂e

$ER_{y,i,j}$ = Emission reductions by project device of type i and batch* j during year y in t CO₂e

LE_y = Leakage emissions in the year y

* The batch is defined as the population of the device of the same type commissioned at a certain calendar year as prescribed by §13 of the applied methodology.

The $ER_{y,i,j}$ is defined as:

$$ER_{y,i,j} = B_{y,savings,i,j} \times N_{y,i,j} \times \mu_y \times f_{NRB,y} \times NCV_{biomass} \times EF_{projected_fossil\ fuel}$$

Where:

$B_{y,savings,i,j}$ = Quantity of woody biomass that is saved in tonnes per cookstove device of type i and batch j during year y

$f_{NRB,y}$ = Fraction of woody biomass that can be established as non-renewable biomass (f_{NRB})¹

$NCV_{biomass}$ = Net calorific value of the non-renewable woody biomass that is substituted (IPCC default for wood fuel, 0.0156 TJ/tonne, based on the gross weight of the wood that is 'air-dried')

$EF_{projected_fossilfuel}$ = Emission factor for the fossil fuels projected to be used for substitution of non-renewable woody biomass by similar consumers. Use a value of 63.7 tCO₂/TJ

$N_{y,ij}$ = Number of project devices of type i and batch j operating during year y

μ_y = Adjustment to account for any continued use of pre-project devices during the year y when applying equations 6 and 8 (fraction). Use 1.0 in other cases

The $B_{y,savings,i,j}$ is define respectively as per water boiling test, option 3, paragraph 27 of the methodology:

$$B_{y,savings,i,j} = B_{old,i,j} \times \left(1 - \frac{\eta_{old,i,j}}{\eta_{new,i,j}}\right)$$

Where:

$B_{old,i,j}$ = Annual quantity of woody biomass that would have been used in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project device type i and batch j

$\eta_{old,i,j}$ = Efficiency of the old devices being replaced by project devices of type i and batch j

¹ Default values endorsed by designated national authorities and approved by the Board are available at <http://cdm.unfccc.int/methodologies/standard_base/index.html>.

$\eta_{new,i,j}$ = Efficiency of the project device i and batch j

The parameter $B_{old,i,j}$ was based on the historical data.

The values used in real case CPA shall be ex-ante selected from the fixed values for urban and rural areas and documented at CPA-level according to distribution area. The definition of urban and rural area shall be based on official government classification.

Values provided historical data:

- **1.47** tonnes/person-year for households situated in urban areas; and
- **1.07** tonnes/person-year for households situated in rural areas, i.e. households situated outside urban areas

The value per person from historical data shall be multiplied with average number of persons per household. Only one ICS per household will be allowed under the PoA.

$$B_{old,i,j} = B_{old,HH} \div N_{d,HH}$$

$$B_{old,HH} = B_{old,p} \times N_{p,HH}$$

Where:

$B_{old,HH}$ = Annual quantity of woody biomass that would have been used in the household in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project devices (tonnes/household/year)

$N_{d,HH}$ = Number of project devices per household (number)

$B_{old,p}$ = Annual quantity of woody biomass that would have been used per person in the household in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project devices (tonnes/person/year)

$N_{p,HH}$ = Average number of persons per household (number)

In line with the methodology fixed efficiency $\eta_{old,i,j}$ of 0.1 or 0.2 or weighted average value of both, depend on baseline device(s) will be used.

The $\eta_{new,i,j}$ shall be estimated at CPA level using one of the options provided by the methodology.

$f_{NRB,y}$ will be defined at CPA level using official published data or if not available calculated in line with TOOL30: "Calculation of the fraction of non-renewable biomass".

Leakage Emissions

In line with the methodology a leakage is accounted for by multiplying $B_{old,i,j}$ with the net to gross adjustment factor of 0.95 prescribed by §43 c) of the methodology.. A survey will therefore not be required.

PP will use ex-post default factor provided by AMS-III.BG: "Emission reduction through sustainable charcoal production and consumption" and referenced in the AMS-II.G to account for replacement of charcoal cook-stoves used in the baseline.

The following sources of information have been used in this context:

	/PoA-DD/ /AMSBL/ /AMS-III.BG / /XLS/ /PS/ /VVS/
Findings	CAR 04 (pls refer to Appendix 4 for more information)
Conclusion	The generic CPA-DD has included sufficiently all-methodological choices for the CPAs in line with the applicable methodology. All equations, assumptions are in line with the AMS-II-G, version 10. The proposed sampling plan was defined in accordance with appropriate provisions of the "Standard: Sampling and surveys for CDM project activities and programme of activities" version 07.0. In the opinion of DOE the sampling plan will provide parameter values estimated in unbiased and reliable manner.

D.2.2.7. Monitoring plan

Means of validation	<p>Section I.6.2/I.7.2/I.7.3 contain a proposed generic monitoring plan for the PoA, in line with the requirements of the applied methodology AMS-II.G, version 10.0.</p> <p>Fixed Parameters</p> <p>In section I.6.2 the data and parameters fixed ex-ante are listed.</p> <p>$B_{old,i,j}$ parameter was defined in line with standardized baseline ASB0018. The values used in real case CPA shall be ex-ante selected and documented at CPA-level according to distribution area. The definition of urban and rural area shall be based on official government classification. <u>Values provided by historical data:</u></p> <ul style="list-style-type: none"> 1.47 tonnes/person-year for households situated in urban areas; and 1.07 tonnes/person-year for households situated in rural areas, i.e. households situated outside urban areas; <p>$N_{p,HH}$ is the number of persons in HH and shall be define at the CPA level; $B_{old,HH}$ is calculated by multiplying the $B_{old,i,j}$ by $N_{p,HH}$; $B_{old,i,j}$ is calculated by $B_{old,HH}$ divided by $N_{d,HH}$; $f_{NRB,y}$ default value if available shall be used, or will be calculated in line with TOOL30: Calculation of the fraction of non-renewable biomass; $\eta_{old,i,j}$ is provided by the methodology fixed efficiency of 0.1 or 0.2 or weighted average value of both, depend on baseline device(s) will be used; Leakage_{adj}, default factor provided by AMS-III.BG: "Emission reduction through sustainable charcoal production and consumption" and referenced in the AMS-II.G will be used;</p> <p>In detail all parameters, ex-ante and (if available at PoA-DD level) the values and applicable formulae provided by the methodology have been correctly listed.</p> <p>Monitored Parameters</p> <p>In section I.7.1 the data and parameters monitored are listed.</p> <p>Following parameters: Date of commissioning of batch j, Date of commissioning of project device I, Number of project devices distributed N, Number of project devices distributed per household $N_{d,HH}$; are monitored via sales record.</p> <p>Life Span of the cookstove if applicable, shall be monitored via Manufacturer specification, or certified by a national standards body or an appropriate certifying agent recognized by that body NCV_{biomass} from IPCC will be used but monitored for any updated;</p>
----------------------------	---

The monitoring values of the parameters:

“Number of project devices of type i and batch j operating during year y ” $N_{y,i,j}$ is sampled and calculated, by multiplying the number of devices distributed N with the proportion of the devices operating the pop_stoves_y which shall be monitored for each batch of stoves distributed.

“Efficiency of the device of each type i and batch j implemented as part of the project activity” $\eta_{new,i,j}$ and

“Adjustment to account for any continued use of pre-project devices during year y ” μ_y , are sampled.

$\eta_{new,i,j}$ will be sampled annually for population of an batch. The annual values from 1st batch will be applied subsequently to all batches with the same end-users;

$N_{y,i,j}$ and μ_y will be estimated jointly at least biennially;

Other elements of monitoring plan

The CME will be responsible for the management, data collection, monitoring, data control and calculation. The CME is assisted by a qualified and trained monitoring team consists of one monitoring manager and one data manager. Any third parties involved will have a contractual obligation with the CME. Roles and responsibilities have been clearly defined

In detail all parameters, monitored and (if available at PoA-DD level) the values and applicable formulae provided by the methodology have been correctly listed.

Section I.7.2: Sampling plan

The generic CPA-DD prescribes a random sampling approach to be applied for all CPAs under the PoA.

The target population is defined as the end-users of the ICSs

The objective and reliability requirements have been outlined in the context of the project activity type.

The sampling frame shall be the recorded electronic data in the ICS databases. CPAs can be sampled individually or per group.

The sample size will be calculated using referenced equations provided by the “Guideline: Sampling and surveys for CDM project activities and PoAs”. As per the sampling standard version 7.0, if the sample size calculation returns a value of less than 30 samples, a minimum sample size of 30 shall be chosen when the parameter of interest is a proportion. If the parameter

of interest is a numeric mean value the Student’s t-distribution shall be used if the resulting sample size is less than 30.. The confidence/precision level defined by AMS-II.G have been defined.

The detailed implementation plan was defined. CME will be responsible for the management, monitoring, data control and calculation.

The following sources of information have been used in this context:

/PoA-DD/

/AMSBL/

/PS/

/VVS/

	/GID/ /IM01/ /IPCC/
Findings	CAR 03
Conclusion	<p>A detailed monitoring plan was provided in sections I.6.2, I.7.1 /2 and.3 of the generic CPA-DD.</p> <p>The prescribed generic monitoring provisions are deemed to be feasible and in line with the applied methodology.</p> <p>The sampling plan is prescribed in line with the latest guidelines on sampling, as well as requirements of the sampling standard, such that when fully implemented, sampling results achieved will be unbiased, representative, and reliable.</p> <p>The roles and responsibilities and measures to ensure QA/QC objectives have been clearly defined</p>

D.2.3.Crediting period type and duration

Means of validation	<p>Section J of the generic CPA-DD has been checked and it can be confirmed that each CPA will have a twice renewable crediting period of 7 years each. Appropriate eligibility criterion (#5) , (the start date of the CPA is verifiable through documentary evidence and shall not be prior the start date of the PoA) has also been established by the CME</p> <p>The following sources of information have been used in this context:</p> <p>/PoA-DD/ /AMSBL/ /PS/ /VVS/ /IM01/</p>
Findings	-
Conclusion	<p>The coordinating/managing entity has defined the type and duration of the crediting period applicable to all corresponding CPAs in accordance with §122 of the CDM PoA PS version 2</p>

D.2.4. Eligibility criteria for inclusion of CPAs

No.	Eligibility criterion - Category/Required condition	Means of validation	Findings	Conclusion
1.	Geographical boundary (a) The CPA takes place within the borders of Burundi	This criterion will ensure that all CPAs are within the geographical boundary set by the PoA (Burundi). This can be checked via the host country letters of approval, GPS coordinates, the CPA-DDs as well as relevant technical and financial aspects of the CPA. Therefore, criterion is objective and comprehensive to allow assessment and inclusion of the CPA into the registered PoA	-	According to §124 a), of the CDM project standard for programmes of activities, version 2.0, the geographical boundary of each CPA, including any time-induced boundary, shall be consistent with the geographical boundary set in the PoA. The PoA boundary is set as per page 1, and sections A.2 of the PoA-DD. This eligibility criterion has been sufficiently set for all CPAs
2.	Double counting (b)(i) There shall be no double counting of emission reductions, i.e. each cooking stove sold under the CPA are uniquely marked by an ICS serial number (and/or logo) and recorded in an electronic database for PoA lifetime as described in PoA-DD section C following the below format: O[#PROD].XXXXXX Where: O = OBEN CDM-PoA [#PROD] = production site identification number (1BUJ : Bujumbura site 1, 3NGO : Ngozi site 3, 2GIT : Gitega site 2...) XXXXXX = unique stove ID (e.g. 139120)	Establishing unique identities such as unique serial numbering included also in the sales agreement, mentioned in the CPA-DD, by the CME, will ensure a unique system of verifying each ICS and CPA as a unique project and inclusion into the PoA, without the risk of double-counting of emission reductions.	-	All CPAs shall avoid double-counting of emission reductions through establishing unique identification, in line with §124 b) of the CDM project standard for programmes of activities, version 2.0. This criterion has been sufficiently prescribed for all CPAs.
3.	Double counting (b) (ii) There shall be no double counting of emission reductions, i.e. CPAs shall neither be registered as CDM project activities, included in another registered PoAs, nor the project activities that have been	The CPA-DD, the UNFCCC CDM website and other ER programmes will be checked. There will be contractual agreement between CPA implementer and CME.	-	All CPAs shall avoid double-registration of CPA (and double counting) by checking the UNFCCC homepage and by signing respective agreement with CME. in line with §124 c) of the CDM project

No.	Eligibility criterion - Category/Required condition	Means of validation	Findings	Conclusion
	deregistered.			standard for programmes of activities, version 2.0. This criterion has been sufficiently prescribed for all CPAs.
4.	Technology (c) The CPA specifies the level and type of service provided by the technology/measure as well as its performance, which are in line with the technology outlined in PoA-DD. Specifications of the technology/measure shall include the type, capacity, and other key features of the design of the systems;	The CPA shall aim to replace low efficiency non renewable biomass cook-stove in residential areas in line with applicability conditions of AMS-II.G, version 10.0. The new devices shall provide ICS test/certification/performance report.	-	All CPAs will apply the methodology AMS-II.G. The generic CPA shall involve installation of efficient cook-stoves in Households that were previously using non-efficient cook-stoves. The cook-stoves will comply with the minimum requirements and applicability conditions prescribed by the methodology, as well as §124 d), 124 f) of the CDM project standard for programmes of activities, version 2.0
5.	Start date (d) The start date of the CPA is verifiable through documentary evidence and shall not be prior the start date of the PoA.	As per the PoA Standard version 02.0, no CPA may commence before the PoA start date, or exceed the PoA lifetime. This shall be checked via CPA-DD and the order and/or sale of devices.	-	The start date of a CPA shall not be before PoA start date. The eligibility criterion ensures that all CPAs included in the PoA conform to the guidelines of §124 e) and §185 of the CDM project standard for programmes of activities, version 2.0.
6.	Methodology (e) The CPA applies and complies with AMS-II.G. version 10.0, in particular: <i>All CPAs shall involve dissemination of improved cookstoves or energy efficiency improvements in thermal applications of non-renewable biomass, with a minimum efficiency of 20%. The stoves shall be new' efficiency of at least 20 per cent." The stoves shall be new.</i>	Ensures applicability of the methodology applied in the PoA is met as per CDM guidelines. This can be verified via "Checking relevant sections of CPA-DD on the basis of ICS test/certification/performance report."	-	All CPA utilizing this generic CPA-DD shall apply the small-scale methodology AMS-II.G. All applicability conditions of the methodology shall be met as well, in line with §124 f) and §124 h) of the CDM project standard for programmes of activities, version 2.0.

No.	Eligibility criterion - Category/Required condition	Means of validation	Findings	Conclusion
7.	<p>Additionality (f) (i)</p> <p>The project shall be the distribution (sale) of ICSs to target end-users (households or communities) in Burundi, and therefore classifies as an End-use Energy Efficiency Improvement project.</p>	<p>This criterion will ensure that all CPAs are providing the defined technology and measures within the geographical boundary set by the PoA (Burundi). This can be checked via the sales agreements GPS coordinates, the CPA-DDs as well as relevant technical parameters of the cook-stoves.</p>	-	<p>All CPAs shall be additional to be included in the PoA, applying §9 of the methodological tool: <i>Demonstration of additionality of microscale project activities, version 8.0.</i> This is adequately prescribed in section C of the PoA-DD. This eligibility criterion has been sufficiently set for all CPAs as per §124 g) of the CDM project standard for programmes of activities, version 2.0.</p>
8.	<p>Additionality (f)(ii)</p> <p>The nominal energy savings of each ICS shall be lower than 600 MWh/unit, which is equivalent to 1,800 MWh_{th}/unit/year.</p>	<p>Each of the independent subsystems included in the CPA shall not exceed the micro-scale limit of 600 MWh/unit, which is equivalent to 1,800 MWh_{th}/unit/year to comply with criteria for additionality. The emission reduction calculation shall be checked.</p>	-	<p>The CME has elected to apply the micro-scale threshold at the unit level rather than at the aggregate level of the CPA. This means that any number of ICSs can be sold under one CPA</p> <p>All CPAs are therefore automatically additional under the PoA if their ICSs can demonstrate their thresholds at the unit level.</p> <p>Therefore, each independent subsystem (ICS), defined as the micro-scale CDM unit within the CPA shall not exceed the micro-scale limit of 600 MWh/unit, which is equivalent to 1,800 MWh_{th}/unit/year. This criterion complies with §124 f), 124 g), 124 m) of the CDM project standard for programmes of activities, version 2.0</p>
9.	<p>Local Stakeholder Consultation (g) (i)</p> <p>A local stakeholder consultation (LSC) shall be conducted for each CPA.</p>	<p>All CPA shall conduct the local stakeholder consultations as part of their overall undertaking at CPA</p>	-	<p>All CDM component project activities are required to demonstrate</p>

No.	Eligibility criterion - Category/Required condition	Means of validation	Findings	Conclusion
		level. Each CPA-DD shall demonstrate consideration of any stakeholder comments with verifiable evidence.		consideration of stakeholder input on their activities. This eligibility criterion has been sufficiently set for all CPAs as per §124 i) of the CDM project standard for programmes of activities, version 2.0.
10.	CME approval (g) (ii) A CPA-DD, related emission reduction calculation as well as all required evidence documents for CDM project eligibility shall be submitted to CME, who needs to formally approve the CPA.	CME will review and formally approve the CPA with all applicability and eligibility criteria. A contractual agreement between CME and CPA will be required.	-	Only CPA implementer who signs the inclusion contract with the CME will be included in the PoA. This eligibility criterion has been sufficiently set for all CPAs
11.	ODA (h) The CPA shall not involve any public funding that diverts Official Development Assistance.	The real-case CPA shall demonstrate funding sources, including public funding and ensure that there is no diversion of ODA. Therefore, this criterion is sufficiently established.	-	The guideline §35 and §124 j) in the CDM project standard for programmes of activities ensures the fulfilment of this criterion. The PoA-DD section A.6 provides an affirmation to check that any form of public funding for the CPAs will not amount to diversion of ODA.
12.	Target group (i) The target group of each CPA shall be households. Alternatively, the target group can be communities; ²	The scale and technology/measure of each component project activity allows the CME to assess the baseline, applicability of methodology, impact on potential emission reductions as well as suitability of the technology/measure for the registered PoA. Therefore, this criterion is essential and verifiable via technical specifications. The	-	The eligibility criterion ensures that all CPAs utilizing this methodology will specify the target group for all eligible CPAs in order to conform to the applied methodology, as well as the PoA stated policy, operational and management framework. §124 k) of the CDM project standard for programmes of activities, version 4.0

² Households are domestic units consisting of the members of a family who live together and share food and cooking equipment. Similarly, communities targeted by the PoA are groups of individuals that have a common identity and share some of their resources such as biomass and cooking equipment. For instance, schools, refugee camps are considered communities that are targeted by the project and may be included in the CPAs.

No.	Eligibility criterion - Category/Required condition	Means of validation	Findings	Conclusion
		target group for this CPA shall be specified and verified via sampling in line with the applied methodology.		prescribes this condition.
13.	Sampling (j) The CPA sampling plan complies with the “ <i>Standard for sampling and surveys for CDM project activities and programme of activities</i> ”;	Each CPA will apply sampling approach to calculate the average value of sampled parameters.	-	The eligibility criterion ensures that all CPAs in the PoA will apply the valid sampling method. This eligibility criterion has been sufficiently set for all CPAs as per AMS-II.G.

SECTION E. Internal quality control

Before the submission of the final validation report a technical review of the whole validation procedure was carried out. The technical reviewers are competent GHG auditors where at least one is being appointed for the scope this PoA falls under. The technical reviewers are not considered to be part of the validation team and thus not involved in the decision making process up to the technical review.

As a result of the technical review process the validation opinion and the topic specific assessments as prepared by the validation team leader may have been confirmed or revised. Furthermore reporting improvements might have been achieved.

After the successful technical review, an overall (esp. procedural) assessment of the complete validation has been carried out by a senior assessor located in the accredited premises of TÜV NORD CERT GmbH.

After this step the submission for requesting for registration is conducted.

SECTION F. Validation opinion

ECOEYE CO., LTD. has commissioned the TÜV NORD JI/CDM Certification Program to carry out the validation of the project: “**Improved Cooking Stoves Programme in Burundi supported by Republic of Korea**”, with regard to the relevant requirements for CDM project activities.

The review of the project design documentation and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews have provided TÜV NORD JI/CDM CP with sufficient evidence to validate the fulfilment of the stated criteria.

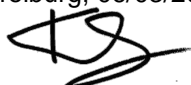
In detail the conclusions can be summarised as follows:

As a result of this validation, the validator confirms that:

- The PoA is in line with all relevant host country criteria and all relevant UNFCCC requirements for CDM. Programme activity approvals have been obtained from host country DNA of Burundi, vide the Letter of Approval (LoA) dated 26/10/2018.
- The PoA additionality is sufficiently justified in the PoA-DD.
- The eligibility criteria established for CPA inclusion are deemed appropriate and sufficient.
- The methodological choices and equations for the calculation of the CPA emission reductions in the PoA are outlined in a transparent manner.
- All information has been consistently applied in the generic CPA-DD form.

The conclusions of this report show, that the PoA, as it was described in the project documentation, is in line with all criteria applicable for the validation.

Freiburg, 06/03/2019




Dr. Grzegorz Kochaniewicz
TÜV NORD JI/CDM CP
Validation Team Leader

Appendix 1. Abbreviations

Abbreviations	Full Texts
BAU	Business as usual
CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CME	Coordinating / Managing Entity
CO ₂	Carbon dioxide
CO _{2e}	Carbon dioxide equivalent
CP	Certification Program
CPA	Component Project Activity
CPA-DD	Component Project Activity Design Document
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	CDM Executive Board
EC	Eligibility Criterion/Criteria
EIA	Environmental Impact Assessment
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GSCP	Global Stakeholder Consultation Process
IPCC	Intergovernmental Panel on Climate Change
PoA	Programme of Activities
PoA-DD	Programme of Activities Design Document
PS	CDM project standard for programmes of Activities
QA/QC	Quality control/Quality assurance
UNFCCC	United Nations Framework Convention on Climate Change
VVS	CDM validation and verification standard for programmes of Activities

Appendix 2.Competence of team member and technical reviewers



Statement of Competence
Appointment and authorization according to the procedures of the TÜV NORD JVCDM Certification Program

Mr. Stefan Winter

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2020-07-27
VCS	Senior Assessor (Validation, Verification) Technical Reviewer	2020-07-27

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.1	Thermal energy generation
1.2	Renewables
2.1	Energy distribution
3.1	Energy demand
4.1	Cement and lime production
4.2	Paper
5.2	Caprolactam, nitric and adipic acid
9.1	Aluminium and magnesium production
9.2	Iron, steel and Ferro-alloy production
13.1	Solid waste and wastewater
13.2	Manure

163 – Rev. 5, Date: 2017-07-20

163_2011-VAN20-F20_2017-07-20_rev5.doc



Statement of Competence
Appointment and authorization according to the procedures of the TÜV NORD JVCDM Certification Program

Mr. David Lubanga


SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2021-10-20
VCS / ISO 14064-2	Senior Assessor Technical Reviewer	2021-10-20

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewables
3.1	Energy demand
13.2	Manure

251 - Rev. 7, Date: 2018-10-19

251_2011-VAN20-F20_2018-10-19_rev7.doc



Statement of Competence
Appointment and authorization according to the procedures of the TÜV NORD JVCDM Certification Program

Mr. Grzegorz Kochaniewicz

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2022-02-08
VCS / ISO 14064-2	Senior Assessor	2022-02-08

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewables
3.1	Energy Demand
14.1	Afforestation and Reforestation

173 - Rev. 8, Date: 2019-02-08

173_2011-VAN20-F20_2019-02-08_rev8.doc

801-VAN20-F20 rev3 / 2012-10-25

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1.	Republic of Burundi, Ministry of Environment, Agriculture and Livestock	- Letter of approval and authorization dated 26/10/2018 from the host country Burundi	/LoA/	PP
2.	CME	PoA Design Document “Improved Cooking Stoves Programme in Burundi supported by Republic of Korea” -version 1.0, dated 07/11/2018 PoA Design Document “Improved Cooking Stoves Programme in Burundi supported by Republic of Korea” -version 1.1, dated 28/01/2019 PoA Design Document “Improved Cooking Stoves Programme in Burundi supported by Republic of Korea” -version 1.2, dated 26/02/2019	/PoA-DD/	PP
3.	UNFCCC	AMS II.G: Energy efficiency measures in thermal applications of non-renewable biomass” Version 10.0	/AMSBL/	UNFCCC
4.	UNFCCC	“TOOL30: Calculation of the fraction of non-renewable biomass” Version 01.0	/TL30/	UNFCCC
5.	UNFCCC	ASB0018 Standardized baseline “Baseline woody biomass consumption for household cookstoves in Burundi” Version 01.0	/ASB/	UNFCCC
6.	UNFCCC	TOOL21: “Demonstration of additionality of small-scale project activities”,	/TL21/	UNFCCC
7.	UNFCCC	TOOL19: “Demonstration of additionality of micro-scale project activities” Version 8.0	/TL19/	UNFCCC
8.	UNFCCC	Guideline: “General guidelines for SSC CDM methodologies”, Version 22.1 Guideline: “Sampling and surveys for CDM project activities and PoAs” Version 04.0	/GID/	UNFCCC
9.	UNFCCC	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)	/CPM/	TÜV NORD
10.	IPCC	IPCC Good Practice Guidance & Uncertainty Management in National Greenhouse Gas Inventories, 2000 Revised 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual	/IPCCC/	IPCC
11.		Clarification on definition of micro-scale CDM units under Tool19	/CL19/	UNFCCC
12.	UNFCCC	Methodological Tool: Assessment of debundling for small-scale project activities (Ver. 04.0).	/DT/	UNFCCC
13.	UNFCCC	CDM project cycle procedure for programme of activities (version 2.0)	/PCP/	UNFCCC
14.	CME	Modalities of Communication	/MoC/	CME
15.	UNFCCC	Kyoto Protocol (1997)	/KP/	UNFCCC
16.	UNFCCC	Programme design document form for CDM programmes of activities (CDM-PoA-DD-Form) -	/PDD-T/	UNFCCC

No.	Author	Title	References to the document	Provider
		Version 08.1		
17.	UNFCCC	CDM project standard for programmes of Activities (Version 02.0)	/PS/	UNFCCC
18.	UNFCCC	CDM validation and verification standard for programmes of Activities_version 02.0	/VVS/	UNFCCC
19.	UNFCCC	CDM Glossary of Terms (ver 9.1)	/GT/	UNFCCC
20.	CME	Modalities of Communication Statement	/MoC/	CME
21.	CME	Prior consideration form, 09/10/2018	/PCF/	CME
22.	CTCN (Climate Technology Centre & Network)	https://www.ctc-n.org/about-ctcn/national-designated-entities/institut-g-ographique-du-burundi	/DNA/	CTCN
23.	The Lutheran World Federation	https://uganda.lutheranworld.org/content/matawi-eco-stove-cooks-and-protects-environment-106	/SPEC/	The Lutheran World Federation
24.	UNEP Riso Centre	www.cd4cdm.org	/cd4cdm/	UNEP
25.	IPCC publications	www.ipcc-nggip.iges.or.jp	/ipcc/	IPCC
26.	UNFCCC	http://cdm.unfccc.int	/unfccc/	UNFCCC
27.	Hakizimana	EAC Strategy to Scale-Up Access to Modern Energy Services - Burundi Country Report (Godefroy Hakizimana, 2008)	/EAC 2008/	others
28.	Nkurunziza	Rapport d'étude sur les données du bois-énergie au Burundi (François Nkurunziza, 1999)	/FAO/	FAO
29.	Sabuhungu et all	Note d'estimation des quantités de Charbon de Bois utilisées dans la Ville de Bujumbura (2014) and An Analysis of the Urban Consumption of Charcoal by Household: The Case of the City of Bujumbura in Burundi (2015)	/AUC/	others
30.	Drigo	WISDOM – East Africa (Rudi Drigo, 2005)	/WISD/	others
31.	Autorite Nationale Designe du Burundi pur le MDP (DNA)	Confirmation on exemption from EIA	/EEIA/	others
32.	IMF	Burundi: Poverty Reduction Strategy Paper II	/PRS/	others

Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1. CLs from this validation

CL ID	01	Section no.	A.6	Date: 22/11/2018
Description of CL				
The sentence doesn't state if any public funding from Annex I were received.				
CME response				Date: 23/11/2018
The sentence was revised. The clear and unconditional statement that no public funding of the PoA occurs was provided.				
Documentation provided by CME				
<input checked="" type="checkbox"/>	Changes in the PoA-DD	Section(s):	New version No.: 1.1	
<input type="checkbox"/>	Changes in MR	Section(s):	New version No.:	
<input type="checkbox"/>	Changes in XLS	Worksheet(s):	New version No.:	
<input checked="" type="checkbox"/>	Other:			
DOE assessment				Date: 23/11/2018
The sentence was revised. The clear statement was "no public findings were received" was provided.				

Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open)
	<input checked="" type="checkbox"/> The finding is closed

CL ID	2	Section no.	D.1	Date: 22/11/2018
Description of CL				
The sentence related to the start of CPA and local stakeholder consultation at the CPA level, shall be clarified.				
CME response				Date: 23/11/2018
The sentence was revised.				
Documentation provided by CME				
<input checked="" type="checkbox"/>	Changes in the PoA-DD	Section(s):	New version No.: 1.1	
<input type="checkbox"/>	Changes in MR	Section(s):	New version No.:	
<input type="checkbox"/>	Changes in XLS	Worksheet(s):	New version No.:	
<input checked="" type="checkbox"/>	Other:			
DOE assessment				Date: 23/11/2018
The statement on LSC conducted on CPA lever was removed. OK				
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open)			
	<input checked="" type="checkbox"/> The finding is closed			

Table 2. CARs from this validation

CAR ID	01	Section no.	I.2	Date: 22/11/2018
Description of CAR				
The included applicability criteria do not list of the criteria from the applied Methodology.				
CME response				Date: 23/11/2018/
The applicability criteria were revised.				
Documentation provided by CME				
<input checked="" type="checkbox"/>	Changes in the PoA-DD	Section(s):	New version No.: 1.1	
<input type="checkbox"/>	Changes in MR	Section(s):	New version No.:	
<input type="checkbox"/>	Changes in XLS	Worksheet(s):	New version No.:	
<input checked="" type="checkbox"/>	Other:			
DOE assessment				Date: 23/11/2018/
The applicability criteria were revised and follow the Methodology. OK				
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open)			
	<input checked="" type="checkbox"/> The finding is closed			

CAR ID	02	Section no.	I.5	Date: 22/11/2018
Description of CAR				
The description of baseline scenario is not in line with PoA-DD template requirements.				
CME response				Date: 23/11/2018/
The description baseline scenario was revised.				
Documentation provided by CME				
<input checked="" type="checkbox"/>	Changes in the PoA-DD	Section(s):	New version No.: 1.1	
<input type="checkbox"/>	Changes in MR	Section(s):	New version No.:	
<input type="checkbox"/>	Changes in XLS	Worksheet(s):	New version No.:	
<input type="checkbox"/>	Other:			
DOE assessment				Date: 23/11/2018/
The description of baseline scenario was revised and follows the PoA-DD template requirements. A section on current cooking practice in Burundi has been added.				
Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open)			
	<input checked="" type="checkbox"/> The finding is closed			

CAR ID	03	Section no.	I.6.2	Date: 22/11/2018
Description of CAR				
The value, provided by the methodology, for the parameter $\eta_{old,i,j}$ was not clearly stated.				
CME response				Date: 23/11/2018/
The value, provided by the methodology was provided.				
Documentation provided by CME				
<input checked="" type="checkbox"/>	Changes in the PoA-DD	Section(s):	New version No.: 1.1	
<input type="checkbox"/>	Changes in MR	Section(s):	New version No.:	
<input type="checkbox"/>	Changes in XLS	Worksheet(s):	New version No.:	
<input checked="" type="checkbox"/>	Other:			
DOE assessment				Date: 23/11/2018/
The value for the parameter $\eta_{old,i,j}$ has been clearly stated.				
Conclusion <i>Tick the appropriate checkbox</i>		<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed		

CAR ID	04	Section no.	I.5	Date: 03/01/2019
Description of CAR				
The ASB0018 Standardizes baseline "Baseline woody biomass consumption for household cookstoves in Burundi" Version 01.0 applied in the PoA-DD published for the global stakeholder consultation (GSC) expired and was replaced by values from Literature.				
<ul style="list-style-type: none"> • For households situated in urban areas 1.47 tonnes/person-year was chosen. • For households situated in rural areas 1.07 tonnes/person-year was chosen. 				
Justification on the used values was not provided.				
CME response				Date: 04/02/2019/
These values are derived from country-specific literature [for urban areas: EAC Strategy to Scale-Up Access to Modern Energy Services - Burundi Country Report (Godefroy Hakizimana, 2008); for rural areas: Rapport d'étude sur les données du bois-énergie au Burundi (François Nkurunziza, 1999)] and deemed conservative as compared to the following alternate sources: -For urban areas, 1.71 tonnes/person-year [Note d'estimation des quantités de Charbon de Bois utilisées dans la Ville de Bujumbura (2014) and An Analysis of the Urban Consumption of Charcoal by Household: The Case of the City of Bujumbura in Burundi (2015)] and 1.5 tonnes/person-year [ASB0018: Baseline woody biomass consumption for household cookstoves in Burundi (expired Nov 26 th 2018)] respectively. -For rural areas 1.09 tonnes/person-year [WISDOM – East Africa (Rudi Drigo, 2005)] and 1.1 tonnes/person-year [ASB0018] respectively These values can be further considered conservative provided that per capita GDP in the country has doubled in the last decade.				
Documentation provided by CME				
<input checked="" type="checkbox"/>	Changes in the PoA-DD	Section(s):	New version No.: 1.1	
<input type="checkbox"/>	Changes in MR	Section(s):	New version No.:	
<input type="checkbox"/>	Changes in XLS	Worksheet(s):	New version No.:	
<input checked="" type="checkbox"/>	Other:	All the literature referenced above.		
DOE assessment				Date: 05/02/2019

The used 1.47 tonnes of fuel wood (converted from use of charcoal) per person and year values for households situated in urban areas was published in “EAC Strategy to Scale-Up Access to Modern Energy Services”, “Burundi Country Baseline Report and Workplan” (G. Hakizimana 2008). The value is based on average use of charcoal as predominant energy source of households in urban areas. This publication from 2008 is conservative in comparison with latest publication “An Analysis of the Urban Consumption of Charcoal by Household: The Case of the City of Bujumbura in Burundi” (P. Ndimanya 2015) which published a value of charcoal resulting in of 1.708 ton of wood/per/day. Therefore the applied values of 1.47 tonnes/person/year, being also similar to the value estimated in expired ASB0018 is to deemed conservative.

The 1.07 tonnes of fuel wood per person-per year for households situated in rural area was published in Rapport d'étude sur les données de bois-energy au Burundi (F. Nkurunziza 1999) and was based on study conducted in 1994. In the same report the value of 0.88 tonnes/person-year from study conducted in 1989 was published.

In 2005 Wisdom published - East Africa (R. Drigo 2005) listed a value of 1.073 tons of fuel wood/person/year used for cooking in rural households.

The latest study on use of quantity of wood in rural areas was published “EAC Strategy to Scale-Up Access to Modern Energy Services”, “Burundi Country Baseline Report and Workplan” (G. Hakizimana 2008). The study published the average value of 0.741 ton of wood (not including quantity of charcoal) used per person and year in the rural areas. The same publication was used to justify the use of quantity of woody biomass used in the urban areas.

The listed sources above present high variation of the values of the wood consumption for rural households in Burundi. Nevertheless the values reported by Nkurunziza (1999) suggest the increase of wood consumption in rural households over time.

Therefore the value of 1.07 ton/person/year used in the PoA-DD is reasonable and conservative.

Conclusion <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> Additional action should be taken (finding remains open) <input checked="" type="checkbox"/> The finding is closed
---	--

Table 3. FARs from this validation

FAR ID	-	Section no.	-	Date: DD/MM/YYYY
Description of FAR -				
CME response				Date: DD/MM/YYYY
Documentation provided by CME				
DOE assessment				Date: DD/MM/YYYY

- - - - -

Document information

Version	Date	Description
02.0	29 December 2017	Revision to align with the requirements of the “CDM validation and verification standard for programme of activities” (version 01.0).
01.0	4 May 2015	Initial publication.
Decision Class: Regulatory		
Document Type: Form		
Business Function: Registration		
Keywords: programme of activities, validation report		