

PROJECT REVIEW REPORT

This project review report includes findings raised during Verra's review of the project specified below. The VVB must address the findings before the project request can be considered for approval by Verra. The project review report will be made publicly available on the Verra Registry. Confidential information may be provided in separate attachments.

Project ID	3197
Project Name	Kenya Jiko Kisasa Improved Cookstove Program I
Review Type	Registration
Program(s)	VCS Program
Project Proponent	Guangzhou Iceberg Environmental Consulting Services Co., Ltd.
Methodology	VMR0006 "Methodology for Installation of High Efficiency Firewood Cookstoves" version 1.1
VVB	4K Earth Sciences Private Limited
Assessment Criteria	VCS Standard, v4.4
Date of First Issue	10 July 2023
Review Conclusion	Approved
Date of Final Issue	27 February 2024

FINDINGS

#	Finding Description	VVB Response	Status
1	Further information and assessment on agreement with cookstove manufacturer		
	<u>Issue</u> The validation report (VR) does not describe which evidence has been validated in order to ensure that no double counting exists with the cookstove manufacturers. <u>Action item</u> 1. The VVB must clearly indicate which is the evidence validated in order to ensure that no double counting exists with the cookstove manufacturers. <u>Program rule(s)</u> VCS Validation Report Template v.4.2, Section 3.3.2	Round 1 <u>VVB Response</u> The local partner and end users have signed agreements with project proponent stating clearly that the PP has the sole ownership of the VCU's arising from the project. It was validated from the document submitted as titled "13_ICs Donation and Carbon Transfer Agreement". VVB also reviewed the other GHG registries to ensure that the project is not listed/registered with the other GHG schemes. The information is part of updated validation report, moreover a declaration to this effect has been submitted to the validation team that project will not claim any GHG benefits from other GHG mechanisms. This information is included in the updated validation report in track change mode. <u>Verra Response</u> VVB has confirmed ownership of carbon credits. This finding is closed. Round 2 <u>VVB Response</u> <u>Verra Response</u>	Closed

2	Further information and assessment of ex-ante and monitoring of $By=1,new,i,survey$		
	<u>Issue</u> Section 5.2 of the PD determines an ex-ante value of $By=1,new,i,survey$ of 1.16 tonnes/device/year. The VR only states that this value has been considered reasonable based on local expertise and sourced from a ‘Fuel consumption Test Report’ (as per CL05). Further information is required. Further, as per Section 5.2 of the PD, $By=1,new,i,survey$ will be measured during first year of implementation with a minimum sample size as per Option b Section 8.4. However, Section 5.3 determines a different sample approach. <u>Action item</u> 1. The VVB must ensure that the project proponent includes all the details related to the ex-ante determination of $By=1,new,i,survey$ in the PD and indicates a consistent sample approach throughout the PD. 2. The VVB must validate this information and update the validation report as needed. <u>Program rule(s)</u> VCS Project Description Template v.4.2, Section 4.4 VCS Validation Report Template v.4.2, Section 3.3.6 Guideline: Sampling and surveys for CDM project activities and programmes of activities Version 04.0	Round 1 <u>VVB Response</u> VVB would like to clarify that the ex-ante estimation of the $By=1,new,i,survey$ was based on the pilot fuel tests undertaken by the PP. The ex-ante value is only for the determination of ex-ante VERs and this will be monitored as per the methodology during the ex-post scenario. The document “Fuel Consumption Test Report” has been submitted to the project validation team and validation team found it adequate for the ex-ante calculations based on it’s sector expertise. Since the actual value will be decided during verification and therefore section 5.3 has methodology for the monitoring of cited parameter applies in the ex-post scenario. Validation team would like to clarify that Section 5.3 has the provisions for the ex-post monitoring of the parameter $By=1,new,i,survey$ as ex-ante values can not be applied for the ex-post scenario. $By=1,new,i,survey$ is a monitored parameter and methodology has the following provisions for this parameter . Option b Section 8.4 of applied methodology VMR0006, version 1.1 lays down for the following provisions for the ex-post monitoring of $By=1,new,i,survey$. “Project proponent shall carry out a survey of usage prior to implementation of the project activity following the sampling approach described in the latest version of CDM document Sampling and surveys for CDM project activities and programme	Closed

		of activities. Alternatively, the project participant may follow the simple random sampling approach and the minimum sample size should be determined as per the following guidelines: • Project target population < 300: Minimum sample size 30 • Project target population 300 – 1000: Minimum sample size 10% of group size • Project target population > 1000: Minimum sample size 100". PP has chosen the former one i.e. following the sampling approach described in the latest version of CDM document Sampling and surveys for CDM project activities and programme of activities, thus we used multi-stage sampling method in Section 5.3 of PD according to “Standard sampling and surveys for CDM project activities and POAs (Ver9.0)” and “Guideline for sampling and surveys for CDM project and POA_(Ver 4.0)”. Hope this clarifies the query, the validation report has been updated and more clarity has been provided therein to address this clarification.	
		<u>Verra Response</u> Justification for By=1,new,i,survey value and sampling approach has been provided. This finding is closed.	

3 Further information and assessment on calculation of fNRB			
	<u>Issue</u> The project description does not include the details related to the calculation of MAI_{other} and does not confirm if it has been calculated using the most recent historical year for which data is available. Further, there is no information on the cross-checks performed as required by para.13 of the TOOL30, v.03.0.	Round 1 <u>VVB Response</u> Please note that PP has recalculated the fnrb now with the help of GIS data and all MAI values have been updated based on the new study. In doing so the fnrb has been reduced to 0.89 or 89% from the earlier reported value of 0. 9269 (or 92.69%). The values were assessed adequate by the project verification team.	Closed

Finally, as per the referenced study in the VR footnote 9 ‘THE KENYAN COOKING SECTOR OPPORTUNITIES FOR CLIMATE ACTION AND SUSTAINABLE DEVELOPMENT’ (page 37) defines a reported fNRB from the Ministry of Energy of Kenya of 35%.	The data sources have been updated to account the MAI.														
<u>Action item</u> 1) The VVB must ensure that the project proponent calculates the MAI other using the most recent historical year for which data is available. Further, the VVB must ensure that the project proponent justifies the NRB value in accordance with the instructions per para. 13 of the TOOL30 in the PD. 2) The VVB must further elaborate how it verified that the fNRB has been calculated in line with the TOOL30, v.03.0.	The compliance of para 13 of the tool 30 has now been demonstrated in the fnrb spreadsheet under tab ‘1-fNRB Calculation’ (Refer row 19-26). Screenshot is presented here:														
<u>Program rule(s)</u> TOOL30, v.03.0	<table border="1"> <tr> <td rowspan="6">Cross Check</td><td>Forest loss (ha/yr)</td><td>1,03,368</td></tr> <tr> <td>AGB (t/ha)</td><td>200.38</td></tr> <tr> <td>Product (NRB, t/yr)</td><td>2,07,12,880</td></tr> <tr> <td>Estimated NRB (t/yr) whole country</td><td>2,29,72,365</td></tr> <tr> <td>Estimated NRB (t/yr) accessible area</td><td>2,46,83,307</td></tr> <tr> <td>% Difference</td><td>10</td></tr> </table>	Cross Check	Forest loss (ha/yr)	1,03,368	AGB (t/ha)	200.38	Product (NRB, t/yr)	2,07,12,880	Estimated NRB (t/yr) whole country	2,29,72,365	Estimated NRB (t/yr) accessible area	2,46,83,307	% Difference	10	
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<u>Background information</u> Some of the values used (e.g., ratio of tropical mountain forest, ratio of tropical shrub.) in the “2_Kenya fNRB_20230430” spreadsheet are from the Global Forest Assessment report published in 2001 TOOL30, v.03.0: para. 13: <i>If the fNRB value is estimated at the national level, as a cross check, project proponent shall compare the value of estimated NRB with the product of: i) total average above ground biomass tonnage of the area of forest areas deforested in recent past (tonnes/ha), and ii) most recent available observed annual rate of deforestation (ha/yr). If the estimated NRB value is more</i>	As far as the page 37 of the report THE KENYAN COOKING SECTOR OPPORTUNITIES FOR CLIMATE ACTION AND SUSTAINABLE DEVELOPMENT’ is concern, the methodology adopted by the Ministry of Energy of Kenya of 35% is not available in the report. But is clear for the UNFCCC that the fnrb was used by using the CDM Tool 30. On the contrary “Ministry of Environment” which the DNA of Kenya had reported the fnrb in the Climate Action Plan 2018-22 as 92%, which was cited by many CDM PoAs viz CPA under PoA 10476¹ (CPA 10476-P1-0001-CP1). Now the value 89% considered by PP has been assessed as correct by following all the steps of the CDM Tool, version 03. Validation report has been now updated with respect to the updated value of fnrb.														

¹<https://cdm.unfccc.int/UserManagement/FileStorage/KH6VX0DEYTBZJRM3GSO8CI5QLU4AWP>

	than 10% above the value calculated as per the product of biomass and deforestation rate, justification shall be provided for the higher value for NRB.		
		<u>Verra Response</u> <u>Issue</u> The f_{NRB} value has been updated, however the calculation details are missing in section 4.4 of PD. <u>Action item</u> 1. The VVB must ensure that the project proponent provides f_{NRB} calculation in section 4.4 of PD. <u>Program rule(s)</u> VCS Project Description Template v.4.2, Section 4.4	
		Round 2 <u>VVB Response</u> The calculations complying with the methodological tool 30 formulas, have been demonstrated in Section 4.4 of the revised VCS PD. VVB assessed the calculation in line with the requirements mentioned in the CDM Tool 30 and consistent with the f_{nrB} spread sheet.	
		<u>Verra Response</u> The calculation details have been provided. This finding is closed.	

4 Further assessment required on the validation of participation under other GHG programs			
	<u>Issue</u> Section 3.1 of the validation report does not indicate how the VVB checked that the project does not participate under other GHG programs, besides the confirmation by the PP.	Round 1 <u>VVB Response</u> VVB reviewed the other GHG registries to ensure that the project is not listed/registered with the other GHG schemes. The information is part of updated validation report, moreover a declaration to this effect has been submitted to the validation	Closed

<u>Action item</u> 1. The VVB must further elaborate how it validated that the project does not participate under other GHG programs, besides the declaration from the PP. <u>Program rule(s)</u> VCS Validation Report Template v.4.2, Section 3.1	team that project will not claim any GHG benefits from other GHG mechanisms. The information is part of the revised validation report.	
	<u>Verra Response</u> The validation report has been updated. This finding is closed.	

5 Missing sampling method		
<u>Issue</u> Section 2.1 of the VR does not include an objective assessment of the proposed sampling plan used for undertaking the validation (i.e., why the site visit to 11 end users has been considered sufficient to ensure a reasonable level of assurance of the audit). <u>Action Item</u> 1. The VVB must provide a description of the sampling method used for conducting the validation in Section 2.1 of the validation report, including justification for any acceptance levels selected. <u>Program rule(s) or methodology section</u> VCS Validation Report Template v4.2, Section 2.1	Round 1 VVB Response Please note that validation team undertaken the acceptance sampling for the determination of baseline scenario, confirmation of local stake holder, project stoves fuel estimation, baseline fuel estimation inter alia. This is to be noted that project had partial distributions at the time of onsite audit, baseline fuel consumption has to be derived through ex-post monitoring of By=1,new,i,survey as per the provisions of VMR0006, version 1.1. Validation team followed the “Standard for Sampling and Surveys for CDM Project Activities and Programme Activities” version 09 (Applicable to the monitoring of this group) esp. for taking samples out of the CME’s sample. Verification team had adopted the acceptance sampling approach to verify the sampling result of the PP for the applied verification period. For the determination of DOE’s acceptance sample size, verification team assumed the following factors: 1. Acceptable quality level (AQL) - 0.5% 2. Unacceptable Quality Level (UQL) – 20% 3. Producer risk- 10% 4. Consumer risk- 10 % Validation team has determined acceptance sample size for all the sample survey parameters based on the “Table. Sample size and	Closed

		acceptance number based on AQL, UQL, and producer and consumer risks” of standard “Sampling and surveys for CDM project activities and programme of activities” version 09.0. From the above assumed factors, the verification team determined the minimum sample size (n) as 11 minimum samples for Clean Energy stoves under the project and acceptance number (c) as Zero, chosen with the representative age group. The verification team shared the samples with PP during on-site visit. During site visit/interviews, verification team visited sample household using the ICS system applying the random selection to cross check the baseline scenario, project fuel consumption etc. <table border="1" data-bbox="978 613 1780 885"> <thead> <tr> <th>Parameters</th><th>DOE Sample size (n)</th><th>No of CME's record beyond unacceptable level (C)</th><th>Accepted/Rejected</th></tr> </thead> <tbody> <tr> <td>Baseline scenario, stove cost paid or not, LSC, signed agreement, carbon waiver etc.</td><td>11 samples</td><td>0</td><td>Accepted</td></tr> </tbody> </table> The above information is now part of revised validation report. <u>Verra Response</u> The validation report has been updated to include the sampling approach. This finding is closed.	Parameters	DOE Sample size (n)	No of CME's record beyond unacceptable level (C)	Accepted/Rejected	Baseline scenario, stove cost paid or not, LSC, signed agreement, carbon waiver etc.	11 samples	0	Accepted	
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6	Further information and assessment on baseline survey		
	Issue The PD Section 3.4 states that the baseline survey conducted from 25/05/2022 to 06/06/2022 complies with the Guidelines for sampling and surveys for CDM project activities and programmes of activities, since 120 HH have been surveyed from 6 villages and equation 16 for multi stage sampling has been applied. However, it remains unclear which were each of the parameters used in the equation in order to achieve the sample size indicated. Further, the VVB does not assess if the sample is representative of the conditions of all activity instances under the project. Action Required 1. The VVB must ensure that the project proponent provides, in Section 3.4 of the PD, the values of each of the parameters used in the calculation of the sample size of the baseline survey per the CDM guidelines for sampling and surveys. 2. The VVB must further elaborate, in Section 3.3.6 of the VR, how it validated that the sample size of the baseline survey complies with the Guidelines for sampling and surveys for CDM project activities and programmes of activities, v.04.0. 3. The VVB must assess whether the PP's sample of 6 villages is representative and appropriate for the locations of future activity instances. Program Rule(s) <i>Guidelines for sampling and surveys for CDM project activities and programmes of activities, v.04.0.</i>	Round 1 VVB Response The details of parameters used in equation 16 has been added in Section 3.4 of the updated PD. It includes the detailed as per the sampling guidelines: According to Equation 16 in Guideline for sampling and surveys for project activities and programmes of activities (Version 04.0) as well as the baseline survey: $c \geq \frac{\frac{SD_B^2}{p} \times \frac{M}{M-1} + \frac{1}{u} \times \frac{SD_W^2}{p} \times \frac{(\bar{N}-\bar{u})}{(\bar{N}-1)}}{\frac{0.1^2}{1.645^2} + \frac{1}{M-1} \times \frac{SD_B^2}{p}}$ Equation (16) Where: c = Number of groups that should be sampled M = Total number of groups in the population (120 villages) $\bar{u}$ = Number of units to be sampled within each group (pre-specified as 10 households) $\bar{N}$ = Average units per group (50 households per village) SD_B^2 = Unit variance (variance between villages) SD_W^2 = Average of the group variances (average within village variation) p = Overall proportion 1.645 = Represents the 90% confidence required 0.1 = Represents the 10% relative precision Since the result of baseline survey is 100% using open fire and three-stone fire, which means the η_{old} of all the surveyed households belongs to option(a) of parameter table η_{old}. in Section 5.1. Therefore, the default value $\eta_{old} = 0.1$ is used for all the surveyed households. Thus, SD_B^2=the variance between villages=0, SD_W^2=average within village variation =0. Therefore, when the	Close d

		number of villages that were sampled is 6, 90/10 confidence/precision was achieved in the baseline survey (because when $SD_B^2=SD_W^2=0$, the calculation result of the right side of Equation 16 is 0, which means C=number of groups (it means villages for the project) that should be sampled≥ 0. So when $C=6$, 90/10 confidence/precision was achieved). The information is now part of the updated VSC PD and the same has been validated in the validation report.	
		<u>Verra Response</u> The baseline survey details have now been included in PD. This finding is closed.	

7	Further validation of additionality		
	<u>Issue</u> Section 3.3.5 of the VR states that the cookstoves are distributed free of cost to the end users. However, it remains unclear which was the evidence validated by the VVB in order to confirm so. Further, the following statement is not clear: <i>‘This was also confirmed by the government officials who were on board by the PP during the local stakeholder consultation and aware of the project’.</i> <u>Action item</u> 1. The VVB must further elaborate how it validated that the cookstoves are implemented and distributed free of cost to the end users, and explain the statement above related to the government officials. <u>Program Rule(s)</u>	Round 1 <u>VVB Response</u> Validation team would like to clarify that during the interview with the beneficiaries as part of acceptance sampling, this was asked whether they paid any cost while the stoves they got from the technology supplier/implementer. This was confirmed by the HHs that they didn't pay any charges. Moreover, while validating the local stakeholder consultation process, the validation team had an opportunity to meet with the government officials and during the interview the officials also confirmed that the project distribution/implementation has their approval and it is implemented at the provisions of zero cost to the end users. This information is now part of the updated VCS validation report.	Closed

	VCS Validation Report Template v.4.2, Section 3.3.5		
		<u>Verra Response</u> VVB has provided confirmation that ICS are distributed free of cost. This finding is closed.	

8 Missing reference of project start date			
	<u>Issue</u> Reference 14 of the VR does not indicate the details of the evidence observed of the project start date, such as its unique identification/location. <u>Action item</u> The VVB must detail the evidence used to assess the project start date. <u>Program rule(s) or methodology section</u> VCS Validation Report Template v.4.2, Appendix 1	<u>Round 1</u>	Closed
		<u>VVB Response</u> The start date was validated by reviewing the project document named “Kenya ICS Donation and Carbon Transfer Agreement for Distribution in The Start Date”, which shows details of households who received ICS on first day of the project, including location of the household and unique ID of ICS etc. Moreover, this was also validated by the database maintained by the project partner in their local office. Validation team reviewed the database in conjunction with the “ICS Donation and Carbon Transfer Agreement” agreement with the first beneficiary. The information is now elaborated in the revised validation report.	
		<u>Verra Response</u> The justification for start date has been provided. This finding is closed.	

9 Missing monitored parameter			
	<u>Issue</u> Section 5.2 of the project description does not include the efficiency of the baseline stoves as a monitored parameter in line with the as per VMR0006, v.1.1, Section 9.2. <u>Action Required</u>	<u>Round 1</u>	Closed
		<u>VVB Response</u> Please note that the PP has chosen the dropdown method for the efficiency as per the provision of VMR0006, version 1.1 as per the equation 5. The annual dropdown values are part of section 5.2 is the updated VCS PD based on the initial monitored efficiency of	

1. The VVB must ensure that the project proponent includes in Section 5.2 (and not in Section 5.1) the monitoring of the efficiency of the baseline stoves. 2. The VVB must validate this information and update the validation report as needed. <u>Program Rule(s)</u> VMR0006, v.1.1, Section 9.2 VCS Project Description Template v4.2, Section 5.2 VCS Validation Report Template v4.2, Section 3.3.8	new stove.	
	<u>Verra Response</u> <u>Issue</u> The parameter η_{old} efficiency of the baseline stoves is still included in section 5.1 of PD whereas VVB response is regarding the project efficiency.	
	<u>Action Required</u> 1. The VVB must ensure that the project proponent includes in Section 5.2 (and not in Section 5.1) the monitoring of the efficiency of the baseline stoves.	
	<u>Program Rule(s)</u> VMR0006, v.1.1, Section 9.2 VCS Project Description Template v4.2, Section 5.2	
	Round 2	
	<u>VVB Response</u> The parameter has been included under section 5.2 of the VCS PD now. VVB assessed the revised PD has been adequately updated to address the query.	
	<u>Verra Response</u> The parameter has been included in monitored parameters. This finding is closed.	

10	Insufficient description of the project activity		
	<u>Issue</u>	Round 1	Closed
		<u>VVB Response</u>	

	Section 1.11 of the project description does not provide sufficient information and detail on how the project activity will be deployed. <u>Action Required</u> 1. The VVB must ensure the project proponent updates Section 1.11 of the project description to include more information about how the project activity will be deployed. Specifically, include information on the schedule of distribution of cookstoves (i.e., number of cookstoves distributed per year, location/villages that will receive cookstoves, etc.) <u>Program Rule(s)</u> VCS Project Description Template, v4.2, Section 1.11	The project plans distribute 100,000 fuel-efficient improved cookstoves (ICS) in 2 years to replace the baseline cookstoves in households from 100-400 villages all over the country. 50,000 ICSs are expected to be distributed per year. The local partners are in charge of the distribution. They are local experienced organizations who can ensure that the cookstoves reach the households that need them most. Iceberg maintains close contact with local partners to resolve issues during distributing process in time. A digital database is used to store the information of distribution. The information is now part of the section 1.11 in the updated PD. The validation team interviewed the top management of the Iceberg to confirm the same.	
		<u>Verra Response</u> The implementation plan has been included in PD. This finding is closed.	