



WOMEN LED CLEANER COOKING INITIATIVE IN ODISHA



Document Prepared by KBS Certification Services Pvt. Ltd

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Report Title	Women led cleaner cooking initiative in Odisha
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Prepared By	KBS Certification Services Pvt. Ltd.
Contact	Registered Office: KBS Certification Services Pvt. Ltd. 414-424, Om Shubham Tower, Neelam Bata Road, N.I.T.

	Faridabad, Haryana-121001, India Tel: +91 129 4034513, 4054513, Email: info@kbsindia.in Website: www.kbscertification.com
Approved by	Managing Director: Kaushal Goyal
Work carried out by	Team Leader & Technical Expert (3.1): Ms. Anjana Sharma Validator: Ms. Shilpa Swarnim Technical Reviewer: Mr. K Sudheendra Manager T & C: Mr. Tushar Chaudhari

Summary:

SDG13 Ventures Pte Ltd has commissioned KBS Certification Services Pvt. Ltd. to undertake validation of the VCS project activity: “Women led cleaner cooking initiative in Odisha”, with regard to the relevant requirements of VCS Standard version 4.3.

The proposed project activity aims to increase access of households and communities to improved cook stoves by disseminating high thermal efficiency and low greenhouse gas emitting cooking stoves known as Improved Cook Stoves (ICS) to the rural households of rural and semi urban communities living in Odisha state of India. The implementation of the project activity will result in replacement of low efficiency and high greenhouse gas emitting stoves in the households, thereby resulting in reduction of firewood consumption & consequent emissions from combustion. Overall objectives through the implementation of the project are reduction of greenhouse gases, conservation of forests leading to climate change mitigation in a sustainable manner, as well as improved health conditions of ICS users due to improved indoor air quality along with drudgery reduction in everyday cooking.

A risk-based approach has been followed to perform this validation. **In the course of the validation 06 Clarification Request (CL) and 07 Corrective Action Request (CAR) were raised and successfully closed.**

1 Forward Action Request (FAR) was raised during validation.

The validation is based on the VCS PD; the subsequent background investigation, follow-up interviews and supporting documents made available to the validation team by project proponent.

As a result of the validation, the validation team confirms that:

- The project fulfils criteria of VCS Standard Version 4.3.
- The project is in line with all relevant VCS requirements.
- The project baseline is sufficiently justified in the PD.
 - **The calculation of the baseline and project emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 15,588,662 tCO₂e is most likely to be achieved within the 10 years of fixed crediting period.**
- **No restrictions or uncertainties were identified related to the validation.**

CONTENTS

1	INTRODUCTION	5
1.1	Objective	5
1.2	Scope and Criteria	5
1.3	Level of Assurance	6
1.4	Summary Description of the Project	6
2	VALIDATION PROCESS	7
2.1	Method and Criteria	7
2.2	Document Review	8
2.3	Interviews	8
2.4	Site Inspections	10
2.5	Resolution of Findings	10
3	VALIDATION FINDINGS	11
3.1	Project Details	11
	Conditions Prior to Project Initiation	13
	Compliance with Laws, Statutes and Other Regulatory Frameworks	14
	Additional Information Relevant to the Project	14
3.2	Safeguards	18
3.3	Application of Methodology	20
3.4	Non-Permanence Risk Analysis	44
4	VALIDATION CONCLUSION	44
	APPENDIX 1: REFERENCES	46

1 INTRODUCTION

1.1 Objective

SDG 13 Ventures Pte Ltd has commissioned KBS Certification Services Pvt. Ltd. to undertake VCS validation of the project activity: “Women led cleaner cooking initiative in Odisha”, with regard to the relevant VCS requirements of VCS Standard version 4.3; to attain real, measurable, additional and permanent emission reductions.

The purpose of validation is to ensure a thorough, independent assessment of the project description (PD), in particular the project's description eligibility, ownership, crediting period and details regarding its compliance with the law statutes and other regulatory frameworks

- The requirements of VCS Program Guide Version 4.2 /10/
- The requirements of VCS Standard Version 4.3 /11/
- To assess the project's compliance with other relevant rules, including the project country (India) legislation and
- Other relevant rules are validated in order to confirm that the project description as documented is sound and reasonable and meet the stated requirements and identified criteria.

The validation is seen as necessary to provide assurance about the quality of the project and its intended generation of emission reductions over the project's crediting period without any double counting.

1.2 Scope and Criteria

The scope of the validation is defined as an independent and objective review of the Project Description Document, where methodological deviations and the project's compliance in section 1 (i.e., Project Details) is reviewed against the requirements of VCS Standard. KBS has employed a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of Emission Reductions.

The items covered in the validation are described below:

- VCS Criteria

- VCS Project Description
- Background investigation and follow up interviews
- Draft validation reporting with CARs & CLs, if any
- Final validation reporting

The validation is based on the information made available to KBS and on the contract conditions.

The validation is not meant to provide any consulting to the project proponent. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project description. The work carried out by KBS is free from any conflict of interest.

1.3 Level of Assurance

☒ Reasonable level of assurance

The validation report is based on VCS-PD, supporting documents made available to the validator and information collected through performing interviews. Based on the process and procedures conducted, KBS states whether the information in the PD:

- is materially correct and is a fair representation of the actual project details, and
- is prepared in accordance with VCS requirements and the applied methodology for information pertaining to description, methodological deviations and reporting.

The validation work is carried out as per this requirement and the validation opinion is assured provided the credibility of all above. Details are presented in the Validation statement in section 4 below.

1.4 Summary Description of the Project

The proposed project activity aims to increase access of households and communities to improved cook stoves by disseminating high thermal efficiency and low greenhouse gas emitting cooking stoves known as Improved Cook Stoves (ICS) to the rural households of rural and semi urban communities living in Odisha state of India. The implementation of the project activity will result in replacement of low efficiency and high greenhouse gas emitting stoves in the households, thereby resulting in reduction of firewood consumption & consequent emissions from combustion. Overall objectives through the implementation of the project are reduction of greenhouse gases, conservation of forests leading to climate change mitigation

in a sustainable manner, as well as improved health conditions of ICS users due to improved indoor air quality along with drudgery reduction in everyday cooking.

As confirmed through the remote interview and through the documents, the technology deployed under the project activity shall be thermally efficient (in compliance with the methodological requirements) and having an average lifespan of 7 years. The currently eligible types of cookstoves to be distributed include the “Greenway Jumbo stoves” a single pot improved cookstove which is made of a fuel chamber for combusting the renewable biomass. The pot-rest is above the fuel chamber. The stove has one air inlet and weighs approximately 3,782 grams. Greenway Jumbo stoves has been tested for thermal efficiency of 38% as per water boiling test and certified by third party (Test Report Submission by KIRDI- Kenya Industrial Research and Development Institute)/2/. The efficiency of ICS has been estimated to be more than 3 times the efficiency of old cookstoves (i.e., 38 % as compared to the 10% efficiency of traditional stoves). The efficiency test report provided to assessment team was reviewed and it was concluded that the efficiency test/2/ was conducted in accordance with the procedure stipulated in the applied methodology VMR0006, version 1.1/09/

The start date of the project is 1 June 2022 which is the date of commissioning of the first batch of ICS as verified through the project database. The duration of crediting period is of fixed 10 years i.e., it starts from 01-June-2022 to 31-May-2032.

The individual households using ICS will sign an agreement with the PP will enter into contractual agreement with the beneficiaries by virtue of which, the end user will confirm use of cook stove as well as transfer the VCU right to the Project Participant. The estimated amount of emission reductions per annum are 1,558,866 tCO₂e and a total of 15,588,662 tCO₂e for the total crediting period.

2 VALIDATION PROCESS

2.1 Method and Criteria

The project activity applies approved VMR0006 version 1.1/09/, categorized under sectoral scope 3 “Energy Demand”. The validation consisted of the following phases:

- Completeness check and desk review of the Project Description
- Interview with project representatives and issuance of findings.
- Resolution of findings followed by preparation of the final validation report and opinion.

Timeline of Validation:

Work order signed	22 December 2021
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Onsite validation/Remote audit	13 May 2022
(Draft) Reporting	19-May-2022
(Final) Reporting	13-October- 2022

2.2 Document Review

After the submission of the draft PD /1.1/ and supporting background documents related to the project design and baseline from the client, the completeness of information made available as per VCS standard version 4.3 /11/ requirements is reviewed. Furthermore, the validation team used additional documentation by third parties like host party legislation, technical reports referring to the project design or to the basic conditions and technical data available on public domain. The project has been listed in the VERRA (<https://registry.verra.org/app/projectDetail/VCS/2868>). A desk review is carried out to assess the following:

- the project details as per VCS PD template
- any methodological deviations applied
- compliance with relevant law and regulations
- conditions prior to project initiation/ baseline

The list of documents reviewed is included in the section 'References'.

2.3 Interviews

As a result of the COVID-19 pandemic, taking into account the rules of relevant national and local authorities (local to the VVB offices as well as to locality of the site visits), World Health Organization (WHO) recommendations, policies of the VVB, email clarification for Verra guidance on site visits, notification of Covid-19 Travel Guidance for Projects <https://verra.org/covid-19-travel-guidance/> and other relevant travel restrictions and guidance (for example, a requirement to self-isolate upon return from specific countries), the VVB has skipped the on-site visit. Further Email from VERRA dated 24/03/2020 from "Andrew Beauchamp" has been referred as per which *"The VCS Program does not explicitly mandate site visits as part of the validation and verification process, only that VVBs must achieve a reasonable level of assurance on all validations and verifications (per Section 4.1.2 of the VCS Standard, v4.3). Therefore, where a VVB can achieve a reasonable level of assurance without conducting a site visit, or through a remote site visit, this is in conformance with the VCS rules, and no request for*

an exemption or pre-approval from Verra is required. However, where a validation/verification has been conducted without a site visit, or through a remote site visit, please ensure that the applicable section of the validation/verification report includes a discussion of how a reasonable level of assurance was achieved without an in-person site visit”.

Hence, the VVB has used other standard auditing techniques for validation as referred to in VCS Rules/requirements, VCS Validation and Verification Manual version 3.2.

Validation team has used the following alternative means for its assessment and to justify that they are sufficient for the purpose of validation. Along with desk review, audit team has conducted remote audit interview as follows:

- A complete desk review of the VCS PD /1.2/, as well as all applicable country legal requirement and supportive evidences have been checked by the validation team.
- Validation team has performed virtual online interview with PP in order to check implementation, ownership, technology, thermal testing procedure, sampling and monitoring procedures etc.
- Cross-check evaluation, for information received from interviews, under the scope of all information and references provided in VCS PD and supporting documents.

Details of interviewees, topics covered and additional information are presented below:

Date:	13 – May -2022 (Skype interviews)		
Key points discussed:	Name of person, interviewed	Designation, Organization	Team member
Host Country rule and regulations related to project activity, Project description, Ownership, Project start date, technology, Conditions prior to the Project initiation, Participation under other GHG program, sampling, procedure to	Phool Chand	Director, Jagurih Corporate Consultants Pvt. Ltd.	Anjana Sharma (Team leader), Shilpa Swarnim (validator),
	Akhil Nair	PP representative,	
	Nilanjana Roy	PP representative,	
	Aditi Singh	PP representative,	

avoid double counting, monitoring plan	Md. Shoeb Kazi	PP representative,	
	Mr. Sapan	PP representative,	
	Ankit Mathur	SDG 13/Greenway	

2.4 Site Inspections

KBS has not conducted site inspection for the validation process, remote interviews were carried out and have been detailed in section 2.3 above.

2.5 Resolution of Findings

KBS applies the risk-based approach aimed at focusing on high-risk issues to the validation results whilst not omitting any part of the mandatory processes. A few discrepancies were found during the validation and the findings was submitted to the project proponent, indicated under the titles corrective action requests (CARs) and clarification requests (CLs). CARs and CLs require the PP to take relevant actions. Criteria for judging items as CAR or CL are as follows:

Corrective action request (CAR):

- the project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions
- the Voluntary Carbon Standard's requirements have not been met, or
- there is a risk that emission reductions cannot be monitored or calculated.

Clarification request (CL):

- Information is insufficient or not sufficiently clear to determine whether the applicable VCS requirements have been met.

FAR is to be raised to highlight issues related to project implementation that require review during the first verification of the project activity. FARs does not relate to VCS requirements for registration.

CARs and CLs are to be resolved or closed out if the PP modifies the project description, rectifies the PD or provides adequate additional explanations or evidence that satisfies the concerns. If this is not completed, the project activity cannot be recommended for registration under VCS registry.

07 CARs and 06 CLs were found during validation and successfully closed.

2.5.1 Forward Action Requests

1FAR was raised during the validation.

3 VALIDATION FINDINGS

3.1 Project Details

- Project scope, activity, type, technologies and measures implemented, and eligibility of the project.

A typical project instance under project activity will target rural and households using low efficiency and higher GHG emitting stoves. Replacement of conventional firewood stoves with higher efficiency ICS models will be carried out in the targeted households. ICSs are more efficient than conventional firewood stoves as they reduce heat loss and improve heat transfer and combustion efficiency. Fuel efficient ICS models with improved heat transfer and combustion efficiency will be deployed, resulting in a decrease in fuel use in comparison to conventional pre-project stoves, while also reducing particulate matter and carbon emissions.

As confirmed through the remote interview and through the documents/2//8/, the technology deployed under the project activity shall be thermally efficient single stove, improved cookstoves (in compliance with the methodological requirements) and having an average lifespan of 7years. The currently eligible types of cookstoves to be distributed include the “Greenway Jumbo stoves” that meet the requirements of the methodology. “Greenway Jumbo stoves” has been tested for thermal efficiency of 38% as per water boiling and certified by third party (KIRDI). The efficiency of ICS has been tested/2/ to be more than 3 times the efficiency of old cookstoves. The efficiency test report provided to assessment team was reviewed and it was concluded that the efficiency test/2/ was conducted in accordance with the procedure stipulated in the applied methodology VMR0006, version 1.1/9/

The project involves energy efficient cookstove distribution which falls under the category of efficiency improvements in thermal applications, therefore it is eligible under the scope of VCS Program. The start date of the project is 01- June-2022; which is based on the date of commissioning of the batch. The duration of crediting period is of fixed 10 years i.e., it starts from 01-June-2022 to 31-May-2032.

The individual households using ICS will sign an agreement with the PP will enter into contractual agreement with the beneficiaries by virtue of which, the end user will confirm use of cook stove as well

as transfer the VCU right to the Project Participant. The sample agreement /7/ was validated by the assessment team for the cook stoves and found in line with the VCS-PD/01/. A record keeping system and unique identification of the ICS will be done by user's information collected through the Beneficiary Agreement and compiled in distribution records, as set out in the "distribution and data sharing agreement"/5/ between PP and distributor. This will include username, identification number and address/location of the user's house, stove unique serial code and distribution date. The record keeping system will ensure that each ICS can be traced to project to avoid double counting. The estimated total amount of emission reductions over the chosen 10-year "fixed crediting period" is 15,588,662 tCO₂e. The estimated amount of emission reductions per annum are 1,558,866 tCO₂e. The project activity falls under large-scale project category since the annual average GHG emission reductions are more than 300,000 tCO₂e.

The Validation team has checked all the above-mentioned details and confirms that all the information provided is accurate. Further VVB has glanced through GS Impact registry, UNFCCC CDM Project database and GCC Project site to cross check if the project is listed in any of the above mentioned schemes and was able to conclude that this project is VCS voluntary project and not applying for any other carbon schemes,

Findings: CAR 07 and CL 03 has been raised and successfully closed. Refer to Appendix 3 for further details.

- Project proponent

SDG13 Ventures Pte Ltd . is the Project proponent (PP), which is as per the submitted declaration as the project activity has been developed by SDG13 Ventures Pte Ltd. Therefore, project proponent has sole right to use the generated Emission reductions. PP has been verified during remote interviews and accepted by the validation team.

There are no other entities involved in the project.

- Project start date

As per the project description (PD) /1/, the start date of the project activity is stated as 01-June-2022 which is based on the date of commissioning of the first batch. Validation team has verified the same through the project database shared by the PP and confirmed that this is in accordance with section 3.7 of VCS standard, Version 4.3 /11/ and hence accepted.

- Project crediting period

The VCS Standard version 4.3 /11/ section 3.8.1 state that, “For non-AFOLU projects, the project crediting period shall be either seven years, twice renewable for a total of 21 years, or ten years fixed”. PP has chosen the crediting period of the 10 years for the project activity from 01-June-2022 to 31-May-2032 (including both days) and is of fixed type which is accepted to the validation team. The validation team has confirmed that the same has been correctly mentioned in the VCS-PD.

- Project scale and estimated GHG emission reductions or removals

The estimated volume of emission reduction from the project activity is more than 300,000 tons of CO₂e per year. The validation team confirms that the project activity falls under the category 2 ‘Large Projects’ as per para 3.9.1 of the VCS standard version 4.3 /11/, as it has the potential to reduce GHG emission more than 300,000 tCO₂e/year.

The estimated annual average and the total CO₂e emission reduction by the project activity over the fixed crediting period of 10 years are expected to be 1,558,866 tCO₂e and 15,588,662 tCO₂e respectively. The validation team confirmed that emission reduction forecast is reasonable if the underlying assumptions do not change.

- Project location

The grouped project will be implemented in Odisha, a state in the Republic of India under the national boundary of India. The project boundary is defined by the following GPS coordinates and is found to be consistent.

North – 22° 31’ 14.015” N & 86° 01’ 14.596” E.

South – 17° 50’ 1.134” N & 81° 25’ 16.829” E

West – 21° 06’ 22.496” N & 82° 38’ 14.607” E

East – 20° 41’ 44.569” N & 86° 54’ 53.871” E

Further, project location has been verified through the means of google earth software.

Findings: CAR 02, CL 01, CL 02 has been raised and successfully closed (Refer to Appendix 3 for further details).

Conditions Prior to Project Initiation

In the absence of the project, the existing common practice in the region was less efficient cook stoves to meet the cooking energy demand exists and a large amount of population depends on firewood and wood chips for the same. As confirmed through the baseline survey and review of publicly available articles majority of regions in Odisha still cook using traditional biomass stoves and open fires. The project aims to reduce the demand of non-renewable biomass and the environmental and social burdens caused by inefficient biomass cooking by introducing energy efficient wood stoves to low- income households.

Compliance with Laws, Statutes and Other Regulatory Frameworks

The validation team confirms that there are no laws and regulations governing the use of improved cookstoves in India for households, the same has been confirmed through local expertise of the validation team. The project is a voluntary effort by the project proponent. Though, the government of India promotes use of clean fuel e.g. LPG, however due to the initial capital cost and operating cost, the usage levels are low and most of the rural households still use traditional stoves for cooking. As conformed by literature surveys and baseline studies, an estimated 50% to 60% of households in rural India still cook using traditional biomass stoves and open fires.

The validation team has also confirmed that the baseline scenario presented in the VCS PD/1/ is also in compliance with the laws and regulations of India. Validation team confirms that the project is a voluntary initiative and is not under any mandatory/compliance scheme of the host country.

Net GHG emission reductions or removals generated by this PA will not be used for compliance with any emissions trading program or to meet binding limits on GHG emissions as the host country i.e. India is not a participant in any emission trading programs or nor does it have any binding limits.

Ownership and other programs:

Project Ownership

The project ownership is with SDG13 Ventures Pte Ltd, Project proponent (PP). Jagurih Corporate Consultants Pvt. Ltd. are involved as other entities as consultants. During the registration of ICS, the participating household will sign a declaration to transfer the ownership rights of the carbon assets generated from this project to the project proponent, the same has been confirmed from the sample beneficiary agreement submitted by the PP.

Additional Information Relevant to the Project

Eligibility Criteria

Validation team confirms that the project is a grouped project.

For the inclusion of new project activity instances, the project proponent shall ensure that it meets the eligibility criteria below.

No.	Eligibility criterion - Category	Eligibility criterion - Required condition	Supporting evidence for inclusion
1	The geographical boundary of the project instances including any time-induced boundary consistent with the geographical boundary set in the project Description	The project boundary corresponds to the boundary of Odisha, a state in the host country India. All distributed ICS in a project instance shall be located within geographical boundary.	Location and boundary specified in the project instances stating that the ICS location is limited to a region of Odisha and is supported by Distribution records of ICS. The same has been confirmed during remote audit process and interviews of the project personnel.
2	Conditions that avoid double counting of emission reductions like unique identification of product and end-user locations	A unique numbering system for ICS will be applied in each project stances, assigning a unique number to each ICS and allowing to clearly identify for each ICS to which project stance/cluster it belongs.	The ICS installed in any project instance under this grouped project shall be uniquely identifiable by unique numbering and will be supported by the distribution records. The same has been confirmed during remote audit process and interviews of the project personnel.
3	The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications	Project stances under this grouped project will consist of the distribution of ICS with a thermal efficiency of at least 25% efficiency as per water boiling test or compliance with Tier II and above as per ISO to household users cooking with non-	Type of conventional cook-stoves replaced and ICS type/s implemented and compliance with the technological requirements of VMR0006 to be met

		renewable biomass in the baseline scenario. The project instances will involve replacement of conventional firewood cook-stoves for biomass fired ICS as defined in the VCS PD. Stove types replaced and implemented is defined in the VCS PD, and hence appliances involving the efficiency improvements in the thermal applications of non-renewable biomass as per VMR0006.	
4	The conditions that ensure that the project instances meet the requirements pertaining to the demonstration of additionality	Have characteristics with respect to additionality that are consistent with the initial instances for the specified project activity and geographic area.	The additionality will be demonstrated using financial barrier option in line with applied approved methodology VMR0006. The same has been confirmed during remote audit process and interviews of the project personnel.
5	Where applicable, the conditions related to sampling requirements for the project in accordance with the “Standard for sampling and surveys for CDM project activities and programme of activities”	Monitoring will adhere to all requirements related to sampling for a project instance in accordance with the sampling guidelines including all annexes and amendments till EB 86 Annex 04 and Sampling and surveys for CDM project activities and program of activities version 09.0	For each project instances Sampling will be undertaken as part of the Project Description Sampling Plan. The same has been confirmed during remote audit process and interviews of the project personnel.
7	Methodology adoption	The project instances under this grouped project	For each project instances the project instances participating

		shall use VCS approved methodology – VMR0006: Methodology for Installation of High Efficiency Firewood Cookstoves, v1.1 and shall follow its requirements	in the group project shall comply to the requirements to the implied methodology. The same has been confirmed during remote audit process and interviews of the project personnel.
8	Start date for inclusion	The start date of the project instance under this grouped project shall be same as or later than the grouped project start date	The start date of implementation of the project instance has been is on 1 June 2022 which is the date of commissioning of the first batch of ICS as verified through the project database. The same has been confirmed during remote audit process and interviews of the project personnel.
9	VCU ownership	End users receiving ICSs under the specific project instances contractually cede their rights to claim and own emission reductions under the VCS to the PP of the project.	A default distribution agreement for end users including the provision that emission reductions generated by the stove are owned by the PP will be provided for each instance. The same has been confirmed during remote audit process and interviews of the project personnel.
10	Have evidence of project ownership, in respect of each project activity instance, held by the project proponent from the respective start date of each project activity instance	The ownership of the project activity is with SDG13 Ventures Pte Ltd. The end users receiving ICS under each project instances will sign an end user beneficiary agreement with the project proponent and transfer the rights to claim carbon credit benefit to project proponent.	For each project instances the project instances participating in the group project shall adhere to the provisions of the beneficiary agreement signed with the individual participating user. The same has been confirmed during remote audit process and interviews of the project personnel.

Leakage Management

Not Applicable to this project activity.

Commercially Sensitive Information

No commercially sensitive information has been excluded from the public version of the project description.

Sustainable Development

The following sustainable development benefits are envisaged from the project activity. ^[L]_{SEP}

- Distribute 500,000 high-efficiency clean burning Greenway Jumbo Cookstoves in India, to benefit over 2 million individuals. (SDG 7.1.2)
- Reduce the total fuelwood usage in the project area to generate approximately 15.5 million tCO₂e of emission reductions. (SDG 13)
- Significantly reduce Household Air Pollution (HAP) in rural households (SDG 3.9.1)
- Reduce instance of non-communicable respiratory disease, such as Chronic Obstructive Pulmonary Disease (COPD) among adult family members, particularly women and the elderly. (SDG 3.4.1)
- Reduce the risk of mortality among infants and children under five years of age due to (1) acute lower respiratory illnesses (ALRI), such as pneumonia and bronchitis, the cause of mortality in 12% of children under five, and (2) burns resulting from children falling into open cooking fires. (SDG 3.2.1, 3.2.2)
- Reduce the proportion of time women spend on unpaid domestic work related to collection of firewood, and cooking meals on inefficient traditional cookstoves. (SDG 5.4.1)

The validation team concludes that the project description is accurate, complete, and provides an understanding of the nature of the project.

3.2 Safeguards

3.2.1 No Net Harm

No potential negative environmental or socio-economic impacts have been identified for the project and has been confirmed through the review of project technology.

3.2.2 Local Stakeholder Consultation

As confirmed through the remote interview and through supportive documents/6/, it was confirmed that the local stakeholder consultation for the grouped project activity was conducted on 15/12/2021 at Adhikar Microfinance Pvt. Ltd. in Kalinga Nagar, Bhubaneswar, Odisha from 4 p.m. to 6 p.m.. Stakeholders (such as baseline stove users, representatives from local self-help groups, field assistants, NGOs) were invited through press release on (27/11/2021) in the national newspaper “The Prameya” and therefore, stakeholders were invited almost 15 days prior to the meeting. Further, online participation of the stakeholders was encouraged and detailed contact information of the representative of the project implementer were also made available.

Details of the project technology, its impacts, benefits, environmental and socio-economic issues were discussed with the participants (26 in number) and their concerns if any were asked, and the meeting was concluded with no negative comments.

Validation team confirms that some general questions were asked regarding the ICS, which have been checked from the minutes of meeting. The questions raised by the stakeholders have been detailed in section 2.4 of the PD, however in summary they are related to the benefits, efficiency, lifetime, cost, awareness and maintenance of the project device. It has been verified that there were no negative comments raised by stakeholders in local stakeholder consultation meeting and due to the associated benefits stakeholders have appreciated the proposed project activity.

Further, it was confirmed during the remote assessment that the stakeholders have been provided with access to the contact details of the project participant. Also, the stakeholders are well informed about the grievance redressal procedure announced during the stakeholder consultation and can reach out to the project participant or their local representatives in case of any concern. The end users were encouraged to provide any comments or propositions they may have and distributors have the responsibility to take grievances on the field regarding the project activity and the same will be conveyed to PP during the operation of the project activity. Thus, ongoing communication of stakeholders is followed through a grievance mechanism. Further in accordance with stated monitoring plan the village level representatives shall periodically visit the households to get the feedback on usage and if any complain or concern by end users . Therefore, in line with the requirements of section 3.16.3 of VCS standard version 4.3, it is confirmed that the project participant has established a mechanism for on-going communication with the stakeholders.

3.2.3 Environmental Impact

No negative environmental impacts, as the project involves dissemination of improved cookstoves, hence, environmental impact assessment (EIA) is not required for the project.

3.2.4 Public Comments

Validation team confirms that the project was listed on VCS website from 08/04/2022 to 08/05/2022. Few comments were received and has been responded by PP, details is also included in PD section 2.4. The same has been confirmed form VERRA project site – <https://registry.verra.org/app/projectDetail/VCS/2868>

Findings: CAR 03 has been raised and successfully closed (Refer to Appendix 3 for further details).

3.2.5 AFOLU-Specific Safeguards

The project does not implement AFOLU activity. Thus, this section is not applicable

3.3 Application of Methodology

3.3.1 Title and Reference

Following approved baseline & monitoring methodology is applied;

Methodology: VMR0006- Methodology for Installation of High Efficiency Firewood Cookstoves

Version: 1.1

Sectoral Scope: 03

Tools:

TOOL30: Calculation of the fraction of non-renewable biomass; Version-03, EB 108, Annex-11

TOOL01: Tool for the demonstration and assessment of additionality ; Version-07, EB70, Annex 8.

Sampling and surveys for CDM project activities and programmes of activities, Version-09

3.3.2 Applicability

S. No	VCS Methodology requirement	Project justification	VVB Assessment
1	The project stove is a single pot or multi pot portable	The proposed instances will distribute high efficiency single-pot improved cook stove for thermal application, which	As confirmed through the remote

	or an in-situ cookstove using only woody biomass; Additional requirement to demonstrate that the biomass used is solely renewable biomass in case project activities replacing baseline stoves using fossil fuel	will replace inefficient traditional cookstoves or open cooking practices, leading to saving of non-renewable biomass. The ICS to be distributed under the project activity is Greenway Jumbo stoves. All ICS in this project will replace existing traditional wood stoves; therefore, no greenfield installations are included. Further, the project activity will utilize only renewable biomass under project scenario. This criterion will be checked from data recorded on the baseline stove used prior to ICS installation.	interview and through the documents, the technology deployed under the project activity shall be thermally efficient single stove, improved cookstoves (in compliance with the methodological requirements) and having an average lifespan of 7 years/8/. The currently eligible types of cookstoves to be distributed include the <i>Greenway Jumbo stoves</i> ICS that meet the requirements of the methodology.
2	Project activities shall be implemented in domestic premises	. The project activity will replace traditional wood-based stove in	As confirmed from the remote interviews,

	or in community-based kitchens	individual households in rural/semi urban areas.	replacement of conventional firewood stoves with higher efficiency ICS model <i>“Greenway Jumbo stoves”</i> will be carried out in the targeted households or community-based kitchens of rural areas.
3	The project stove shall have specified high-power thermal efficiency of at least 25% per the manufacturer’s specifications and shall exclusively use woody biomass and can be single pot or multi-pot; in case of project stove replacing fossil fuel baseline stove, it shall exclusively use renewable biomass	The Greenway Jumbo single pot, portable improved cooking stoves planned to be distributed have a specified efficiency of 38% as per water boiling test in compliance with Tier II and above as per ISO as tested and certified by third party.	Based on the remote interviews and through the review of efficiency test report VVB confirms that the <i>“Greenway Jumbo stoves”</i> /8/ has been tested for thermal efficiency of 38%/2/ as per water boiling test certified by third party ,Therefore, all the distributed

			cookstoves type shall have specified high-power thermal efficiency of at least 25% as per the manufacturer's specifications, in line with methodological requirements.
4	Non-renewable biomass has been used in the project region since 31 December 1989, using survey methods or referring to published literature, official reports or statistics.	Proof that biomass has been used in the project region, i.e., in the host country India since 31 December 1989 is available through widespread documentation. Report by National sample survey organization (NSSO), department of statistics, Government of India reveals that 79% of the rural households in India were dependent of firewood and chips in the year 1987-88¹. Also NSSO reported 78% of rural households to be dependent on firewood and chips in the year 1993-94². National sample survey	Based on the remote interviews and through the review of publicly available data VVB confirms that the non-renewable biomass was being used in the project region since 31 December 1989.

¹ https://mpa.ub.uni-muenchen.de/83566/1/MPRA_paper_83566.pdf

² Energy sources of Indian households for cooking and lighting, NSS 66th round.

		organization, Government of India reveals that 75% of the rural households in rural India were primarily dependent of fuelwood and chips³. Fuel wood is the main source of energy in rural areas. Wood energy is mainly used as fuel for cooking at household. The above clearly shows that the rural areas in the host country are dependent on biomass since and before 1989 with not much change in the trend which clearly depicts the dependence of the people of the host country on woody biomass as fuel for meeting thermal energy requirement for cooking at households.	
5	For the specific case of biomass residues processed as a fuel (e.g. briquettes, wood chips), it shall be demonstrated that: (a) It is produced using exclusively renewable biomass (more than one type of biomass may be used). (b) The	The ICS is introduced as energy efficiency measure to replace baseline stoves and reduce the use of non-renewable biomass for combustion. The consumption of the fuel used in the project activity will be monitored. If briquettes utilization in project case the energy consumption for	Through the remote interviews it is confirmed that the grouped project activity shall disseminate energy efficient biomass based “Greenway Jumbo stoves” to replace the baseline

³ https://mpira.ub.uni-muenchen.de/83566/1/MPRA_paper_83566.pdf

	consumption of the fuel should be monitored during the crediting period and (c) Energy use for renewable biomass processing (e.g. shredding and compacting in the case of briquetting) may be considered as equivalent to the upstream emissions associated with the processing of the displaced fossil fuel and hence disregarded.	manufacturing of briquettes and transportation of briquette will be monitored to calculate project emissions	stoves and these stoves shall not be fired with any other type of fuel. However, if any other type of fuel is used, then project emissions shall be calculated accordingly. Monitoring of the consumption of the fuel will also be done for the crediting period.
6	The project description shall explain the proposed method for distribution of project devices including the method to avoid double counting of emission reductions such as unique identifications of product and end-user locations (e.g. programme logo).	A record keeping system and unique identification of the project device will be used. This will include user name, user identification number and address/ location of the user's house and distribution date. The record keeping system will ensure that each ICS can be traced to project instances to avoid double counting.	The validation team by means of remote interviews confirms that the proposed method for distribution of project devices includes the method to avoid double counting of emission reductions such as unique identifications of product and end-user details (name, address etc). Therefore, the validation team confirms that the record keeping system

			will eliminate double counting.
7	The project description shall also explain how the proposed procedures prevent double counting of emission reductions, for example to avoid that project stove manufacturers, wholesale providers or others claim credit for emission reductions from the project devices.	The project proponent will sign an end user agreement with individual household/user to ensure only PP can claim the emission reduction. A default distribution agreement for end users including the provision that emission reductions generated by the stove are owned by the PP will be provided for each user.	During the remote interview and the review of sample beneficiary agreement, it has been confirmed that an agreement will be signed between the users and the PP, which shall give the ownership of VCU to the PP.

Findings: CAR 01, CAR 05 was raised and successfully closed. Refer to Appendix 4 for further details.

3.3.3 Project Boundary

The validation team was able to confirm that all the identified emission sources which are impacted by the project activity are addressed by the approved methodology and can be seen in the Table below.

Source		Gas	Included?	Justification/Explanation
Baseline	Emission from use of non-renewable biomass/Fossil fuel	CO ₂	Yes	Major source
		CH ₄	Yes	Major source
		N ₂ O	Yes	Major source
Project	Emission from use of non-renewable biomass	CO ₂	Yes	Major source
		CH ₄	Yes	Major source
		N ₂ O	Yes	Major source

Source		Gas	Included?	Justification/Explanation
	Emission from manufacturing of briquettes	CO ₂	No	Not considered as briquettes usage is not expected in project scenario
		CH ₄	No	Not considered as briquettes usage is not expected in project scenario
		N ₂ O	No	Not considered as briquettes usage is not expected in project scenario

3.3.4 Baseline Scenario

In line with the VCS standard version 4.3, requirement 3.12.1: “The baseline scenario for the project shall be determined in accordance with the requirements set out in the methodology applied to the project, and the choice of baseline scenario shall be justified.” In this regard, methodology VMR0006 version 1.1 has been referred, wherein as per section 6 “The baseline scenario is the continued use of non-renewable wood fuel (firewood/charcoal) or fossil fuel (coal/kerosene) by the target population to meet similar thermal energy needs as provided by project cookstoves in absence of project activity.”

Further, the validation team confirms that:

- The baseline scenario is fixed by the methodology, applicability conditions of methodology are met by the project, as elaborated under section 3.3.2 above.
- Through the review of baseline survey report type of stoves used in baseline as well as fuel consumption pattern has been checked. Which confirms the baseline scenario established by the methodology i.e continued use of non-renewable wood fuel (firewood/charcoal) biomass in the absence of project. Following this, the fNRB report submitted by PP confirms the overall consumption of woody biomass for the region.
- Through the review of related policies and validation team’s sectoral expertise, it is confirmed that there is no mandated government programme or policy in host country ensuring the distribution of domestic fuel-efficient cookstoves. Also, PP has declared voluntary participation in the project as it is not mandated by any law, statute or other regulatory framework.
-
- During the interview with Project implementation team it was also confirmed by Validation Team that PP has the participating beneficiaries agreement in place which has provisions to ensure that the most deserving households get the Improved Cookstoves (ICS) . The criteria which is to be enforced and supported through a team structure that runs the ground operations are-

- ICS is only distributed to the households who rely on traditional cookstoves (also called mittih ka chullah or 3-stone fires).
- The households use biomass for cooking on the traditional cookstoves.
- ICS is not supplied to households which use fuel other than biomass (for example, charcoal, biogas or briquettes). These households must also not use improved cook stoves or cook stoves with chimney, flue gas ventilation system and grate.
- The traditional stoves do not have provisions for improved combustion through air supply, or flue gas ventilation. These are also without a grate or a chimney.

Since all the beneficiary selected under the project activity shall comply to the baseline requirement of use of non-renewable wood fuel (firewood) in traditional cookstoves to meet the thermal energy requirement therefore for all project activity instance, the baseline scenario is the continued use of non-renewable wood fuel (firewood) by the target population to meet similar thermal energy needs as provided by project cook stoves in absence of project activity.

Additionally, Validation Team has now raised a FAR during this this Validation which shall ensure that on 1st Verification period the DOE shall ensure to cross check all the participating users shall have signed beneficiary agreement and adhere to the requirement of the baseline scenario stated in the methodology and opted in PD

Findings: CL 1 was raised and closed successfully.

3.3.5 Additionality

PP has demonstrated additionality based on the activity method of applied methodology VMR0006 version 1.1, as per which the following steps have been followed:

Step 1: Regulatory Surplus

Through the review of related policies and validation team's sectoral expertise, it is confirmed that there is no mandated government programme or policy in host country ensuring the distribution of domestic fuel-efficient cookstoves. Also, PP has declared voluntary participation in the project as it is not mandated by any law, statute or other regulatory framework.

Step 2: Positive List

As confirmed through the remote interviews, the cookstoves will be distributed at subsidized rate, hence there will be revenue stream apart from the sale of GHG credits. Therefore, PP chosen option 3 for demonstration of additionality.

The project is not implemented as part of government schemes or supported by multilateral funds. The project did not apply any methodology deviations

The project is not implemented as part of government schemes or supported by multilateral funds, as has been confirmed through the declaration of voluntary participation submitted by the PP. It is also confirmed through the remote interviews, project did not apply any methodology deviations.

Step 3: Project Method

The “Tool for demonstration and assessment of additionality” Version-7.0.0 is applied to demonstrate additionality

The Tool provides for a step-wise approach to demonstrate and assess additionality. These Steps include:

Step 0- Demonstration whether the proposed project activity is the first-of-its-kind

Step 1- Identification of alternatives to the project activity consistent with current laws and regulations

Step 2. Investment analysis

Step 3: Barrier analysis

Step 4: Common practice analysis

Step 0- Demonstration whether the proposed project activity is the first-of-its-kind

The proposed project activity is not first of its kind in host country.

Step 1: Identification of alternatives to the project activity consistent with current laws and regulations

Sub-step 1a: Define alternatives to the project activity:

The project activity is to distribute improved cookstove to individual households to traditional stoves, the alternatives to the project activity are

- (a) The proposed project activity undertaken without being registered as a VCS project activity;
- (c) Continuation of the current situation.

Outcome of Step 1a: Identified realistic and credible alternative scenario(s) to the project activity

The alternative identified are

- (a) The proposed project activity undertaken without being registered as a VCS project activity;
- (c) Continuation of the current situation.

Sub-step 1b: Consistency with mandatory laws and regulations:

There are no policies in host country India to regulate fuel usage for cooking at household level and both the alternative identified above are in compliance in host country rule and regulations.

Outcome of Step 1b: Identified realistic and credible alternative scenario(s) to the project activity that are in compliance with mandatory legislation and regulations taking into account the enforcement in the region or country and EB decisions on national and/or sectoral policies and regulations.

Both the alternative identified above are in compliance with host country regulation.

Step 2: Investment analysis

To conduct the investment analysis, use the following Sub-steps:

Sub-step 2a: Determine appropriate analysis method

As the project proponent will sale ICS at a lower price than purchase cost of ICS and there are no other economic benefit than sale of VERs, hence a simple cost analysis is chosen by PP.

Sub-step 2b: Option I. Apply simple cost analysis

The proposed project intends to distribute the ICS at more than 60% subsidy to users (approx. 80%) i.e. individual households; hence financial return from the programme is less than cost incurred. The purchase price of the ICS is 3499 INR which has been verified by invoices and the agreement signed. The project activity is initially distributing the ICS to the households for an amount of 400 INR in the first batch which is commissioned. This underlines that there is a minimum loss of around 3,000 INR, hence without revenue from sale of VCU_s, the project activity is not financially viable. As the end-user does not benefit from a direct financial return and procuring ICSs requires capital, which is a barrier to rural/semi-urban consumers due to difficulties in accessing capital, a wide dissemination of ICSs in the Host Country is unlikely. The actions under the project will alleviate these barriers by promoting distribution of ICSs to end-users at an affordable price. Hence, the project faces investment barrier and is considered to be additional.

Step 3: Barrier analysis:

Not chosen by PP.

Step 4: Common Practice Analysis:

As verified from data available in public domain the penetration level of ICS is very low in host country India and project activity is not a common practice. The ICS distributed as of now are under other GHG programme or under environmental initiative of CSR. As per appendix 1 of applied approved methodology access to clean fuel in rural India is around 22%, which mainly include LPG, hence the project activity is not a common practice.

As each ICS has costs associated with its purchase and distribution and awareness generation, this programme will not occur in absence of the VCS revenue. The action is not financially viable without the support of revenues from the sale of VERs. The end-users for the ICS are currently using crude devices, which indicates and exacerbates the cycle of poverty/suppressed incomes.

The potential users for ICS are typically lower income with the problem (lack of ICS) seen more as a woman's problem thereby relegating it lower in the priority order for household expenditures/investments. The actions under the project will alleviate these barriers by promoting distribution of ICSs to end-users at upwards of an 60% subsidy, thereby making their ownership and subsequent impact possible.

Findings: CL 1 and CAR 1 were raised and closed successfully.

3.3.6 Quantification of GHG Emission Reductions and Removals

Baseline Emissions

The improved cookstove is introduced as energy efficiency measure in the project, therefore equations 1 and 2 of the methodology will be applied to calculate the net GHG emission reductions.

$$ER_y = \sum_i \sum_j ER_{y,i,j} \quad \dots\dots\dots(1)$$

Where,

i = indices for the situation where more than one type/model of improved cookstove is introduced to replace three-stone fire

j = Indices for the situation where there is more than one batch of improved cookstove of type i

ER_y = Emission reductions during year y in t CO₂e

$ER_{y,i,j}$ = Emission reductions by improved cookstove of type i and batch j during year y in t CO₂e and;

$$ER_{y,i,j} = B_{y,savings,i,j} \times NCV_{wood\ fuel} \times fNRB \times (EF_{wf,CO_2} + EF_{wf,non\ CO_2}) \times N_{y,i,j} \times 0.95$$

Where,

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

$NCV_{wood\ fuel}$ = Net calorific value of the non-renewable woody biomass that is substituted or reduced (IPCC default for wood fuel, 0.0156 TJ/tonne)

$fNRB$ Fraction of woody biomass that can be established as non-renewable biomass

EF_{wf,CO_2} CO₂ emission factor for the use of wood fuel in baseline scenario (IPCC default for wood fuel, 112 tCO₂/TJ)

$EF_{wf,non\ CO_2}$ Non-CO₂ emission factor for the use of wood fuel in baseline scenario (IPCC default for wood fuel, 26.23 tCO₂/TJ)

$N_{y,i,j}$ = Number of improved cook stoves of type i and batch j operating during year y

0.95 = Discount factor to account for leakage

The quantify of woody biomass saved $B_{y,savings,i,j}$ due to implementation of improved cook stoves will be estimated using Equations 4 of applied approved methodology:

$$B_{y,savings,i,j} = B_{y=1, new,i,survey} \times ((\eta_{new,i,j}/\eta_{old})-1) \dots\dots\dots(4)$$

Where,

$\eta_{new,i,j}$ = Efficiency of the improved cookstove type i and batch j determined through water boiling test (WBT) during year y, Alternatively, efficiency may be determined using Equation 5 of applied approved methodology

$B_{y=1, new,i,survey}$ = Annual quantity of woody biomass used by improved cook stoves in tonnes per device of type i and batch j, determined in the first year of the implementation of the project through a sample survey

The efficiency of the project stoves can be estimated using equation below

$$\eta_{new,i,j} = \eta_P \times (DF_n)^{y-1} \times 0.94 \dots\dots\dots(5)$$

Where,

η_P = Efficiency of project stove (fraction) at the start of project activity

$(DF_n)^{y-1}$ = Discount factor to account for efficiency loss of project cookstove per year of operation (fraction). This value may be based on actual monitoring or based on manufacturer's declaration on expected loss in efficiency or through publicly available literature on relevant industry standards Alternatively default value of 0.99 efficiency loss per year can be considered.

0.94 = Adjustment factor to account for uncertainty related to project cookstove efficiency test.

In order to address the potential source of leakage which can be attributed to diversion of non-renewable biomass saved by project devices to non-project households which previously used renewable biomass; a net to gross adjustment factor of 0.95 is applied to $ER_{y,i,j}$.

For projects opting for $B_{y=1, new,i,j,survey}$, it shall be demonstrated that the consumption of biomass for individual project stoves can be measured exclusive of one another

Project Emissions

The methodology does not account for baseline emissions separately, but instead quantifies net emission reductions achieved by the project

Leakage

Leakage is already accounted in calculation of emission reduction by adjusting with default value of 0.95.

Net GHG Emission Reductions and Removals

The improved cookstove is introduced as energy efficiency measure in the project, therefore equations 1 and 2 of the methodology will be applied to calculate the net GHG emission reductions.

$$ER_y = \sum_i \sum_j ER_{y,i,j} \dots\dots\dots(1)$$

Where,

- i = indices for the situation where more than one type/model of improved cookstove is introduced to replace three-stone fire
- j = Indices for the situation where there is more than one batch of improved cookstove of type i
- ER_y = Emission reductions during year y in t CO₂e
- $ER_{y,i,j}$ = Emission reductions by improved cookstove of type i and batch j during year y in t CO₂e

and;

$$ER_{y,i,j} = B_{y,savings,i,j} \times NCV_{wood\ fuel} \times fNRB \times (EF_{wf,CO_2} + EF_{wf,non\ CO_2}) \times N_{y,i,j} \times 0.95$$

Where,

- $B_{y,savings,i,j}$ = Quantity of woody biomass that is saved in tonnes per improved cook stove of type i and batch j during year y.
- $NCV_{wood\ fuel}$ = Net calorific value of the non-renewable woody biomass that is substituted or reduced (IPCC default for wood fuel, 0.0156 TJ/tonne)
- fNRB = Fraction of woody biomass that can be established as non-renewable biomass (0.714)

EF_{wf,CO_2}	CO ₂ emission factor for the use of wood fuel in baseline scenario (IPCC default for wood fuel, 112 tCO ₂ /TJ)
$EF_{wf,non\ CO_2}$	Non-CO ₂ emission factor for the use of wood fuel in baseline scenario (IPCC default for wood fuel, 26.23 tCO ₂ /TJ)
$N_{y,i,j}$	= Number of improved cook stoves of type i and batch j operating during year y
0.95	= Discount factor to account for leakage

The quantify of woody biomass saved $B_{y,savings,i,j}$ due to implementation of improved cook stoves will be estimated using Equations 4 of applied approved methodology.

$$B_{y,savings,i,j} = B_{y=1, new,i,survey} \times ((\eta_{new,i,j}/\eta_{old})-1) \dots\dots\dots(4)$$

Where,

$\eta_{new,i,j}$	= Efficiency of the improved cookstove type i and batch j determined through water boiling test (WBT) during year y, Alternatively, efficiency may be determined using Equation 5 of applied approved methodology
$B_{y=1, new,i,survey}$	= Annual quantity of woody biomass used by improved cook stoves in tonnes per device of type i and batch j, determined in the first year of the implementation of the project through a sample survey

Where the project households continue to use baseline cookstoves along with improved cookstoves, Bold shall be adjusted ex-post based on the percentage of project households found to continue such practice according to the following equation.

$$B_{old,adjusted} = B_{old} \times (1-\mu_y)$$

Where,

$B_{old,adjusted}$	= Adjusted Bold to account the ex-post usage of firewood in baseline cookstove(s) by project households in addition to improved cookstove (in tonnes per device)
μ_y	= Adjusted Bold to account the ex-post usage of firewood in baseline cookstove(s) by project households in addition to improved cookstove (in tonnes per device)

Considering 1 ICS distributed/ household, the number of ICS stoves will be 100,000, the saving is calculated as.

$$B_{y,saving,I} = 1.35 \times ((38\% / 10\%) - 1) = 3.78 \text{ tonnes/year}$$

Hence,

$$ER_y = 3.780 \times 0.0156 \times (112 + 26.23) \times 100000 \times 0.714 \times 0.95$$

$$ER_y = 553,157 \text{ tCO}_2\text{e}$$

The efficiency of the project stoves is estimated using equation below taking $DF_n = 0.99$ default value per annum

$$\eta_{new,ij} = \eta_P \times (DF_n)^{y-1} \times 0.94$$

Hence,

$$\text{Year 1} = 0.38 \times (0.99)^{0-1} \times 0.94 = 0.357$$

$$\text{Year 2} = 0.38 \times (0.99)^{2-1} \times 0.94 = 0.354$$

$$\text{Year 3} = 0.38 \times (0.99)^{3-1} \times 0.94 = 0.350$$

$$\text{Year 4} = 0.38 \times (0.99)^{4-1} \times 0.94 = 0.347$$

$$\text{Year 5} = 0.38 \times (0.99)^{5-1} \times 0.94 = 0.343$$

$$\text{Year 6} = 0.38 \times (0.99)^{5-1} \times 0.94 = 0.340$$

$$\text{Year 7} = 0.38 \times (0.99)^{5-1} \times 0.94 = 0.336$$

Therefore, the annual emission reduction considering 5 phase implementations i.e. 1st year 10,000, 2nd year-20,000, 3rd year-20,000, 4th Year-20,000 and 5th year-30,000 is estimated as below considering 10% dropouts of ICS distributed.

Year	Estimated baseline emissions or removals (tCO ₂ e)	Estimated project emissions or removals (tCO ₂ e)	Estimated leakage emissions (tCO ₂ e)	Estimated net GHG emission reductions or removals (tCO ₂ e)
2022-23	553,157	0	0	553,157
2023-24	1,010,460	0	0	1,010,460

2024-25	1,461,411	0	0	1,461,411
2025-26	1,906,075	0	0	1,906,075
2026-27	2,344,514	0	0	2,344,514
2027-28	2,223,635	0	0	2,223,635
2028-29	2,192,508	0	0	2,192,508
2029-30	1,741,557	0	0	1,741,557
2030-31	1,296,893	0	0	1,296,893
2031-32	858,453	0	0	858,453
Total	15,588,662	0	0	15,588,662

The total emission reduction is **15,588,662** tCO₂e over 10 years renewable crediting period.

Through the validation process KBS has confirmed that:

- All the assumptions and data used by the project participants are listed in the PD including their references and sources;
- All documentation used by the project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PD;
- All values used in the PD are considered reasonable in the context of the VCS project activity;
- The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;

All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PD

3.3.7 Methodology Deviations

The project activity has used the VMR0006 version 1.1 /9/ and the PP has completely followed the methodology for the development of the VCS PD /1/. The validation team has confirmed that the PP does not make any deviations from the applied methodology.

3.3.8 Monitoring Plan

The monitoring plan is in line with the applied methodology VMR0006, version 1.1/9/. The monitoring plan will give opportunity for real measurement of emission reductions achieved. Since the project is distribution of ICS, the methodology does not account for baseline emissions separately but instead quantifies the emission reductions achieved in the project and no monitoring for leakage through competitive uses of biomass is required, as the parameter wood usage is multiplied by 95% to account for leakage. The monitor-able action plan for the same has been included in section 5.3 of the VCS PD/1.2/. It is KBS's opinion, that the project participant is able to implement the monitoring plan.

- Data and parameters available at validation

Parameters	Value	Unit	Source/Justification
$f_{NRB,y}$ Fraction of woody biomass saved by the project activity during year y that can be established as non-renewable biomass	0.714	Fraction	Validation team confirms that the value is found to be consistent with the f_{NRB} calculations worksheet provided for assessment and is done according to the tool "Calculation of the fraction of non-renewable biomass", Version 03.0, and has been calculated as follows: $f_{NRB} = \frac{NRB}{NRB + RB}$ where: f_{NRB} = Fraction of non-renewable biomass in the country/region or project area (fraction or %) NRB = Quantity of non-renewable biomass (t/yr) in the country/region or project area (t/yr) RB = Quantity of renewable biomass in the country/region or project area (t/yr)

NCV_{woodfuel} Net calorific value of the non-renewable woody biomass that is substituted or reduced	0.0156	TJ/tonne	Validation team confirms that the value is found to be consistent with the default value as per applied methodology VMR0006, v1.1.
EF_{wf,CO2} CO ₂ emission factor for the use of wood fuel in baseline scenario	112	tCO ₂ /TJ	Validation team confirms that the value is found to be consistent with the default value as per applied methodology VMR0006, v1.1.
EF_{wf,non CO2} CO ₂ emission factor for the use of wood fuel in baseline scenario	26.23	tCO ₂ /TJ	Validation team confirms that the value is found to be consistent with the default value as per applied methodology VMR0006, v1.1.
η_{old} Efficiency of baseline cookstove	0.1	-	As per methodology, for three stone baseline the default value of 0.10 is used. It has been verified from the baseline survey report /14/ that the baseline cook stove was a three stone cookstove.
η_P Efficiency of project stove at the start of project activity	0.38	-	The Greenway Jumbo single pot, portable improved cooking stoves planned to be distributed have a specified efficiency of 38% as per water boiling test in compliance with Tier II and above as per ISO as tested and certified by third party.

- Data and parameters monitored

The parameters that are to be monitored ex-post are:

Parameter	Unit	Source/Justification
$N_{y,i,j}$ Number of project devices of type i and batch j operating during year y	Number	The value will be checked from the Stove distribution record which will be measured directly or based on a representative sample, as verified from the remote audit. The surveys will be conducted at least once every two years (biennial) and the sample size shall be determined based on 95/10 confidence/precision in compliance with the latest version of sampling standard. The number of operating stoves for each device i and batch j shall be determined on a sampling basis through a sampling survey.
$\eta_{new,i,j}$ Efficiency of the device of each type i and batch j implemented as part of the project activity	Fraction	The value will be checked from the Manufacturer's Specification or Certification by a national standards body or an appropriate certifying agent recognized by that body as verified from the remote interviews. In line with equation 5 of the applied methodology, loss in efficiency per year shall be calculated. The efficiency of the project stoves has been estimated using equation below: $\eta_{new,i,j} = \eta_P \times (DF_n)^{y-1} \times 0.94$ Where, η_P = Efficiency of project stove (fraction) at the start of project activity (38%, based on the WBT test report submitted by the PP)

		$(DF_n)^{y-1}$ = Discount factor to account for efficiency loss of project cookstove per year of operation (fraction). This value may be based on actual monitoring or based on manufacturer's declaration on expected loss in efficiency or through publicly available literature on relevant industry standards Alternatively default value of 0.99 efficiency loss per year can be considered. 0.94 = Adjustment factor to account for uncertainty related to project cookstove efficiency test. The efficiency of the project stoves is estimated using equation above taking $DF_n = 0.99$ default value per annum Hence, 0.38 at start of operation Year 1= 0.357 Year 2=0.354 Year 3=0.350 Year 4=0.347 Year 5=0.343 Year 6= 0.340 Year 7= 0.336 Therefore, this parameter is not monitored.
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Life span The operating lifetime of the project device. The life span should be reported if the methodology equation 5 is adopted to determine the project stove efficiency	Years	Through the remote interviews, it has been confirmed that the operating lifetime of the project device shall be based on the manufacturer specifications. PP has applied a value of 7, which has been confirmed from the technical specifications of the stove /8/. The frequency of monitoring the stoves is once at the time of installation of batch of type of stove.
Date of commissioning of batch j To establish the date of commissioning, the Project Participant may opt to group the devices in “batches” and the latest date of commissioning of a device within the batch shall be used as the date of commissioning for the entire batch	Date	The date of commissioning of the batch has been taken as (01-June-2022), which is the date of commissioning/distribution of the last project device in the batch. The distribution of project devices has been confirmed from the submitted project database.
μ_y Adjustment to account for any continued use of pre-project devices during the year y	Fraction	The number of stoves still operating will be determined based on the biennial monitoring surveys. The surveys would capture information related to cooking habits and stove usage of the region. The PP confirmed through interview that the monitoring will be done once in two years (biennial) and will apply one of the below methods for monitoring as per the applied methodology: 1. If the pre-project devices are

		decommissioned and no longer used, as determined by the monitoring survey its value is 0 and B_{old}, adjusted is equal to B_{old}. 2. If both the improved cookstove and baseline cookstoves are used together then surveys shall be conducted to record the average continued operation of baseline cookstoves in a sample of households. - The surveys should be designed to capture the cooking habits and stove usage of households in the region, including quantification of use of baseline cookstoves, by formulating questions and/or collecting evidences to determine the frequency of usage of both the improved cookstoves and baseline cookstoves. - A 95/10 confidence/ margin of error shall be achieved for the sampling parameter irrespective of monitoring frequency as per para 22 of Standard: Sampling and surveys for CDM project activities and programmes of activities, Version 09.0. In case of failure to achieve the desire 95/10, lower bound values shall be used to ensure conservativeness.
$B_{y=1,new,ij,survey}$ Annual quantity of woody biomass used by improved cookstoves in tonnes per	Tonnes	As the applied approved methodology allows ex-post monitoring of the referred parameter hence the value 1.35 is an assumption value taken to demonstrate the calculation. It was concluded by the validation team during interviews with CME

device of type i and batch j, determined in the first year of the implementation of the project through a sample survey.		that the actual value of $B_{y=1,new,i,j}$ survey will be determined in the first year of project implementation with the help of project survey. The biomass is consumed by individual ICS separately and shall be assessed with the help of surveys in the first year of project implementation. This point has been raised during the assessment process by validation team and is reported as CAR 6 in findings lists which was closed post appropriate responses provided by PP. This value shall be determined in the first year of the introduction of the devices (e.g. during the first year of the crediting period, $y=1$) through measurement campaigns at representative households and/or sample survey. As conformed during remote interview, for validation process, the value is assumed 1.35 tonne/device/year to demonstrate the calculations. This value is an “assumption by experience” by PP. The actual value of the same shall be determined in the 1st year of project implementation.

Sample Plan:

As confirmed during the remote interview, the sampling shall be carried out based on the latest Guideline for Sampling and Surveys for CDM Project Activities and Programme of Activities, version 04. PP has opted for representative sampling due to the dissemination of large number of ICS under the project, which will involve grouping and sampling across project instances. The confidence and precision as per Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities shall be applied at the time of sampling. The sampling shall be done to obtain an unbiased and reliable estimate of the proportion or mean value of $(N_{y,i,j})$ and $(\mu_{y,i,j})$. Assessment team confirms that the sampling method is clearly described in line with the description of the population and the sampling plan transparently describes how the samples are selected.

Findings: CAR 06 was raised and successfully closed. Refer to Appendix 3 for further details.

3.4 Non-Permanence Risk Analysis

Non-permanence risk analysis is not applicable.

4 VALIDATION CONCLUSION

SDG13 Ventures Pte Ltd has commissioned KBS Certification Services Pvt. Ltd. to do VCS validation of the project activity: “Women led cleaner cooking initiative in Odisha” having VCS ID 2868, with regard to the relevant requirements of VCS Standard version 4.3; to attain real, measurable, additional and permanent emission reductions.

The proposed project activity aims to increase access of households and communities to improved cook stoves by disseminating high thermal efficiency and low greenhouse gas emitting cooking stoves known as Improved Cook Stoves (ICS) to the rural households of rural and semi urban communities living in Odisha state of India.

The improved cook stoves through replacement of inefficient traditional cook stove will contribute towards reduction of greenhouse gas emission resulting in the reduction of firewood consumption leading to climate change mitigation in a sustainable manner.

A risk-based approach has been followed to perform this validation. In the course of the validation 07 Corrective Action Request (CAR) and 06 Clarification Request (CL) were raised and successfully closed. 1. FAR is raised during the validation. Refer to Appendix 3 for further details.

The validation is based on the VCS PD, additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and supporting documents made available to the validation team by project proponent.

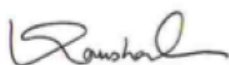
As a result of the validation, the validation team confirms that:

- The project fulfils criteria of VCS Standard Version 4.3.
- The project is in line with all relevant VCS requirements.
- The project baseline is sufficiently justified in the PD.
- The calculation of the project emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 15,588,662 tCO₂e is most likely to be achieved within the 10 years of fixed crediting period.
- No restrictions or uncertainties were identified related to the validation.

Year	Estimated baseline emissions or removals (tCO ₂ e)	Estimated project emissions or removals (tCO ₂ e)	Estimated leakage emissions (tCO ₂ e)	Estimated net GHG emission reductions or removals (tCO ₂ e)
2022-32	15,588,662	0	0	15,588,662

Location: Faridabad, Haryana, India

Date: 26-May-2023



Kaushal Goyal

Managing Director (KBS Certification Services Pvt. Ltd.)

APPENDIX 1: REFERENCES

No.	Document
1	/1.1/ Initial VCS- PD Version 01, dated 06-April-2022 /1.2/ Final VCS-DD Version 03.1, dated 24 May 2023 PD
2	Efficiency (38%) test report of ICS as per water boiling test and certified by third party (Kenya Industrial Research and Development Institute -KIRDI)
3	Spread sheets for Emission Reduction Calculations
4	Undertaking for not availing other forms of environmental credit for the same crediting period under consideration
5	Sample distribution and data sharing agreement between the PP(SDG 13 Venturesand Distributor of ICS
6	Stakeholder consultation records (list of participants and pictures)
7	Sample beneficiary agreement: Tripartite agreement between PP (SDG 13 Ventures
8	Technical specifications of the ICS (Greenway Jumbo Stove) as per manufacturer specification
9	VMR0006- Methodology for Installation of High Efficiency Firewood Cookstoves, version-1.1 dated 22 July 2021
10	VCS Program guide Version 4.2
11	VCS Standard, Version 4.3
12	VCS_Validation_Verification_Manual_v3.2
13	fNRB calculation worksheet report for Calculation of Non-Renewable Biomass fraction (fNRB) using CDM methodology.
14	Literature References-1. Impact of cleaner fuel use and improved stoves on acute respiratory infections: evidence from India-Prabhat Lamichhanea,b,*, Anurag Sharmac and Ajay Mahala,(Reduced ARI.pdf)

	2. https://www.researchgate.net/publication/309476743_Biogas_Stoves_Reduce_Firewood_Use_Household_Air_Pollution_and_Hospital_Visits_in_Odisha_India). 3. Gender and Livelihoods Impacts of Clean Cookstoves in Odisha (source: https://rcdcindia.org/PbDocument/4a11b805c0141d9-f4d2-4d47-86ee-19fb11dd141fICS%20study%20-%20Final%20-%20Odisha%20-%202023-04-2014.pdf) 4. A study conducted lately concludes that even household having LPG or biogas based stoves prefer to use biomass based traditional stove due to habit of using fuel wood (https://www.researchgate.net/publication/309476743_Biogas_Stoves_Reduce_Firewood_Use_Household_Air_Pollution_and_Hospital_Visits_in_Odisha_India) 5. https://www.sciencedirect.com/science/article/abs/pii/S2214629621001055 6. https://rcdcindia.org/PbDocument/4a11b805c0141d9-f4d2-4d47-86ee-19fb11dd141fICS%20study%20-%20Final%20-%20Odisha%20-%202023-04-2014.pdf 6. THE WOODFUEL SCENARIO AND POLICY ISSUES IN INDIA file:///Users/pars/Downloads/fd49.pdf 7. Cooking fuel use patterns in India: 1983-2000 https://www.researchgate.net/publication/4947305_Cooking_fuel_use_patterns_in_India_1983-2000 8. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5958550/ 9. https://en.gaonconnection.com/cooking-gas-lpg-firewood-ujjwala-scheme-rural-india-women-health-risks-air-pollution/ 10. https://www.downtoearth.org.in/news/energy/580-million-indians-will-use-solid-fuel-to-cook-in-2030-61619
15	Comments received by Verra during the public comment period 08 April 2022 to 08 May 2022 for the validation of the Women led cleaner cooking initiative in Odisha, 2868
16	The Prameya -Bhubaneswar Press release

17	Beneficiary Agreement signed with individual user- SDG13 Ventures
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APPENDIX 2: Competence of team members and technical reviewers

Personnel Name:		Anjana Sharma	
Qualified to work as:			
Team Leader	☒	Technical Expert	☒
Validator/Verifier	☒	Financial Expert	☒
Technical Reviewer	☒	Local Expert (India)	☒
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		
SS: 01: Energy industries (renewable/non-renewable sources)	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar		
	TA 1.2: Energy generation from renewable energy sources		
SS 3: Energy demand	TA 3.1. Energy Demand		
SS 5: Chemical industry	TA 5.1 Chemical industry		
SS 12: Solvents use	TA 12.1 Chemical industry		
SS 13: Waste handling and disposal	TA 13.1 Waste Handling and Disposal		
	TA 13.2 Manure		
Approved by (Manager C & T)	Shikha Sharma		
Approval date:	05/08/2021		

Personnel Name:		Shilpa Swarnim	
Qualified to work as:			
Team Leader(trainee)	☒	Technical Expert	☒
Validator/Verifier	☒	Financial Expert	☐
Technical Reviewer	☐	Local Expert	☐
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		
SS: 01: Energy industries	TA 1.2: Energy generation from renewable energy sources		
SS 14: Afforestation and reforestation	TA 14.1 Afforestation and reforestation		
Approved by	Manager C& T		
Approval date:	06/09/2021		

Personnel Name:		Sudheendra K	
Qualified to work as:			
Team Leader	☐	Technical Expert	☒
Validator/Verifier	☐	Financial Expert	☐
Technical Reviewer	☒	Local Expert	☐
Area(s) of Technical Expertise			
Sectoral Scope	Technical Area		
	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar		

Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources
Energy distribution	TA 2.1: Energy distribution
Energy demand	TA 3.1. Energy Demand
Approved By	Shikha Sharma
Approval date:	18/06/2021

APPENDIX 3: Findings

Table 1. Remaining FAR from validation and/or previous verifications (Applicable for verification)

FAR ID	xx	Section no.		Date: DD/MM/YYYY
Description of FAR				
NA				
Project participant response		Date: : DD/MM/YYYY <i>(please mention the date of your response to KBS)</i>		
<i>Please mention the response in this box.</i>				
Documentation provided by project participant				
<i>Please mention the document provided to KBS along with the above response.</i>				
DOE assessment		Date: : DD/MM/YYYY		

Table 2. CL from this validation/verification

CL ID	CL 01.	Section no.	VCS PD	Date: 16/05/2022
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Description of CL

Under section 1.1 and section 3.4, it is stated as *“In the absence of the project activity, the baseline scenario will be the continuous use of non-renewable fuelwood by the target population to meet similar thermal energy demands provided by the ICS in the project scenario”* Hence,

1. In the absence of any baseline surveys been conducted, PP to clarify how does it demonstrate that prevailing old and traditional cookstoves were predominantly used across the region in pre-project scenario.
2. To demonstrate the applicability condition implied of (methodology VMR0006) *“Non-renewable biomass has been used in the project region since 31 December 1989, using survey methods or referring to published literature, official reports or statistics”*, PP has quoted national report by National sample survey organization (NSSO) which is demonstrative of whole India statistics and not for project specific location, Odisha specifically. In such scenario, CME shall clarify how the baseline scenario considered is appropriate and valid?
3. To demonstrate the applicability condition implied of (methodology VMR0006) – *“Additional requirement to demonstrate that the biomass used is solely renewable biomass in case project activities replacing baseline stoves using fossil fuel ”*, PP states that *“This criterion will be checked from data recorded on the baseline stove used prior to ICS installation”*. PP to clarify if any such data has been recorded prior to project implementation and ICS distribution.
4. Under section 1.13, it is mentioned as *“An estimated 50% to 60% of households in rural India still cook using traditional biomass stoves and open fires”*. PP to provide supporting evidence to confirm the same.
5. PP to provide sample distribution agreement for end users for assessment of clause and provisions.

Project participant response

Date: 27/05/2022

1. Various studies conducted through survey for State of Odisha, which concludes that traditional stoves prevalently used by households in majority (https://www.researchgate.net/publication/309476743_Biogas_Stoves_Reduce_Firewood_Use_Household_Air_Pollution_and_Hospital_Visits_in_Odisha_India). Gender and Livelihoods Impacts of Clean Cookstoves in Odisha (source: <https://rcdcindia.org/PbDocument/4a11b805c0141d9-f4d2-4d47-86ee-19fb11dd141fICS%20study%20-%20Final%20-%20Odisha%20-%202023-04-2014.pdf>) A study conducted lately concludes that even household having LPG or biogas based stoves prefer to use biomass based traditional stove due to habit of using fuel wood (https://www.researchgate.net/publication/309476743_Biogas_Stoves_Reduce_Firewood_Use_Household_Air_Pollution_and_Hospital_Visits_in_Odisha_India) <https://www.sciencedirect.com/science/article/abs/pii/S2214629621001055>

The PP has its well experienced ground team which include members from the villages from different districts who are called "Grameen Sahayak". These people are the locals living in different districts of Odisha and have a better and well-established knowledge of the actual scenario on ground. Based on Grameen Sahayaks interaction with end users in various districts further concluded that traditional stoves prevalently used in most of the households.

2. The PP has selected host country to demonstrated the wood fuel usage since 1989, which is appropriate as project region falls within host country and has similar fuel usage pattern. Further, various studies conducted from 1980s indicated that Odisha is one of the poorest state in India was majorly dependent on wood fuel for cooking.
Gender and Livelihoods Impacts of Clean Cook Stoves in Odisha, India

<https://rcdcindia.org/PbDocument/4a11b805c0141d9-f4d2-4d47-86ee-19fb11dd141fICS%20study%20-%20Final%20-%20Odisha%20-%202023-04-2014.pdf>

THE WOODFUEL SCENARIO AND POLICY ISSUES IN INDIA

<file:///Users/pars/Downloads/fd49.pdf>

Cooking fuel use patterns in India: 1983-2000

https://www.researchgate.net/publication/4947305_Cooking_fuel_use_patterns_in_India_1983-2000

The below study also confirms usage of wood by more than 73% households in rural Odisha

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5958550/>

3. The project activity replaces existing traditional woodstoves with ICS technologies. The same can be checked in the end user agreement post implementation.
4. This is sourced from published literature survey e.g. **54% Indian households still using firewood, cow dung as cooking fuel: Study**
<https://en.gaonconnection.com/cooking-gas-lpg-firewood-ujjwala-scheme-rural-india-women-health-risks-air-pollution/>
580 million Indians will use solid fuel to cook in 2030
<https://www.downtoearth.org.in/news/energy/580-million-indians-will-use-solid-fuel-to-cook-in-2030-61619>
5. A sample end user agreement is attached along with the responses for DOE review.

Documentation provided by project participant

Sample end user agreement

DOE assessment	Date: 16/06/2022
1. Verification Team has reviewed the reference documents provided by PP as weblink in response above and has following observations- - The Case studies specific to state Odisha is pertaining to year 2014 (Gender and Livelihoods Impacts of Clean Cookstoves in Odisha) and 2016 (Biogas Stoves Reduce Firewood Use, Household Air Pollution, and Hospital Visits in Odisha, India). The other two references quoted is indicative of India of large. PP to conform if this the latest available reference data for baseline references for the current project which has start date as of 2022. - The above response for baseline is not reflecting in submitted PD under section 3.4. Hence this part of CL is OPEN. 2. The above provided references has been reviewed by Verification Team. As the query is linked to comments review above, where-in PP shall conform if this the latest available reference data for baseline references for the current project which has start date as of 2022. Hence this part of CL is OPEN 3. PP indicates in response provided that the baseline cookstove shall be conformed and recorded while signing the sale agreement post implementation. A sample of agreement has been provided which conforms the baseline usage data recording format. Hence this part of CL is Closed. 4. PP has provided the reference for the quoted range and the reference paper has been assessed by Verification Team. The study indicates that “54% Indian households still using firewood, cow dung as cooking fuel”. Hence this part of CL is Closed. 5. Verification team has assessed the Agreement sample provided by PP which confirms the traditional prevalent cookstove of the beneficiary. However, as mentioned in VCS PD “<i>The SVPL will provide ICS to end users with more than 60% subsidy.</i>”. But the agreement does not highlight the sale price of the ICS by beneficiary to conform this. PP to clarify the same. Hence this part of CL is OPEN.	
Project participant response	Date: 01/08/2022
1. The baseline scenario is already established by the methodology. So, there is no need of any other supportive establishing the baseline. However, it is confirmed that the provided data is the latest available reference data for baseline references for the current project 2. The baseline is already established by the methodology. Baseline reference for the project activity will shall not be a requirement. However, it is confirmed that the provided data is the latest available reference data for baseline references for the current project. 5. The end user agreement is signed mutually by the PP and end-user. This agreement objective is to show the transfer of rights of generated carbon credits from end user to the PP. The cost part is not included in the agreement. The sale price is provided in the sale invoice.	
Documentation provided by project participant	
Sale invoices	
DOE assessment	Date: 16/08/2022

1. PP has reconfirmed that the baseline scenario considered in the revised VCS PD is as per the methodology requirement and states that- « *The baseline scenario is the continued use of non-renewable wood fuel (firewood) by the target population to meet similar thermal energy needs as provided by project cookstoves in absence of project activity» and the source material submitted are the latest available référence data for baseline assesment.*
Also Considering refernce of similar projects registered (VCS ID 2533, VCS ID 2336, VCS ID 2342, VCS ID 2473), reflecting baseline scenarios which is applicable to host country as a whole and not just project region specific. ALso as the use of Non-renewable biomass is further demonstrated using the fnrb calculation which is established for state of Odisha specifically, hence VVB is in accordance that the baseline scenario and référencés considered is appropriate and valid. **Hence this part of CL is now CLOSED.**
2. As assesed above (in point 1), VVB is in accordance that the baseline scenario and référencés considered is appropriate and valid as project region falls within host country and has similar fuel usage pattern. **Hence this part of CL is now CLOSED.**
6. Through the interviews of CME and as well as the clarification provided by the PP, it is concluded that the pre-defined agreement signed with beneficiary does not mention cost of the ICS distributed. VVB was further able to conform the sale price of ICS distributed from the sales invoice shared by PP and found satisfactory. **Hence this part of CL is now CLOSED.**

Thus, CL 1 is now CLOSED.

CL ID	CL 02.	Section no.	VCS PD	Date: 16/05/2022
Description of CL				
1. Under section 1.4 and 1.11 of PD, sufficient information about the selection criteria adopted and practiced for beneficiaries' identification for the rural and semi-urban households is not been provided. PP to demonstrate how the end users have been selected and identified for ICS distribution. 2. PP to further clarify how it intends to avoid double counting of distribution of ICS. 3. As inferred during remote assessment that distribution of ICS shall be initiated from 15th May 2022, hence PP to provide updated database of ICS beneficiaries for assessment.				
Project participant response			Date: 27/05/2022	

1. An awareness programme was conducted by PP, through its well experienced ground team which include members from the villages from different districts who are called "Grameen Sahayak". The awareness programme included interaction with end users to understand the current practices and to demonstrate the improved cookstoves to end users with explanation of associated 2. benefits. Also, once the distribution process starts, households come and seek for the ICS on their own. 3. Each ICS will have a Uniquely identifiable number which will be supported by distribution records. The records will have the details of the end-user including name, address as well as a copy of an identity proof. The numbers, name, address etc. will be double checked for any double counting. 4. The distribution of the cookstoves occurs batch-wise, the date indicated was the expected date, which is updated in revised PD as the distribution has started in mid-May 2022. The expected date of commissioning of the first batch is 30/06/2022. So, the distribution database is unavailable at the moment and will be shared once become available.	
Documentation provided by project participant	
-	
DOE assessment	Date: DD/MM/YYYY
1. The response provided by PP was also conveyed during remote audit process. However, PP needs to provide a documentary evidence of any such <i>awareness programme</i> been conducted in the specified project region for confirmation, further confirming how the end users have been selected and identified for ICS distribution. Hence this part of CL is OPEN. 2. PP has clarified in revised PD and in response above that the record keeping system will ensure that each ICS can be traced to project to avoid double counting. Hence this part of CL is Closed. 3. The start date of the project activity has now been updated to 30 June 2022, which is the date indicated by PP for commissioning of first batch, hence database unavailability is accepted. Hence this part of CL is Closed	
Project participant response	Date: 02/08/2022
1. The awareness programs held in the villages is a part of the internal program. The ground team ensures people are well aware about the benefits of using the stoves. The grameen sahayak ensures to interact with the people of the village to make sure that there is no doubt in the minds the villagers. These interactions happen on a regular basis.	
Documentation provided by project participant	
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DOE assessment	Date: 17/08/2022
The clarification provided by PP regarding awareness programs held in the villages has been accepted by the validation team. This was reconfirmed during further project meet with CME and via interviews, hence this part of CL is now Closed .	

CL ID	CL 03	Section no.	VCS PD	Date: 16/05/2022
Description of CL				
1. Under section 1.8 of the submitted VCS PD, project start date which is the expected date of commissioning has been mentioned as 15/02/2022. PP is required to provide evidence for the project start date. 2. Under section 1.9 of submitted VCS PD, the start date of crediting period is mentioned as 15/02/2022. PP to demonstrate how this date is considered as the start date of crediting period.				
Project participant response		Date: 31/05/2022		

1. The expected date of commissioning of the first batch is revised as 30/06/2022, which will be the expected start date. As the start date is still expected, evidence for the same is unavailable. 2. As the date of commissioning of first batch is revised, thus the crediting period is updated accordingly in revised PD.	
Documentation provided by project participant	
<i>PD Version-02</i>	
DOE assessment	Date: 17/06/2022
1. In the revised VCS PD- PP has revised the start date of the project. It has been updated to be 30 June 2022 which is the expected start date for commissioning of the first batch of ICS. However, in the supportive provided, PP has submitted sales invoices issued for the improved project stoves to beneficiary which is dated 18/05/2022. PP to clarify and conform- - If distribution/commissioning of ICS has already been initiated before 30 June 2022. - Will the stoves distributed before this date will be accounted for in the Emission reduction calculation sheet. Hence this part of CL is OPEN. 2. In the revised PD, the crediting period has now been revised (30/06/2022 to 29/06/2032, ten years fixed crediting period). Hence this part of CL is Closed.	
Project participant response	Date: 03/08/2022
1. The implementation of the ICS has been initiated. The start date considered for the project activity is 01/06/2022. The stoves distributed before 01/06/2022 will be accounted in the project activity as they will be accounted in the 1 st batch of distribution. However, the ERs will be only claimed from the start date of the crediting period. The changes to the start dates have been incorporate in the revised PD	
Documentation provided by project participant	
VCS PD version 02	
DOE assessment	Date: DD/MM/YYYY
Under section 1.8 of the submitted VCS PD, the expected date of commissioning has been now updated as 01-June-2022 (<i>The start date of the project activity is 1st June 2022 which is the commissioning of the first batch of ICS</i>) Hence this part of CL is CLOSED	

CL ID	CL 04	Section no.	VCS PD	Date: 16/05/2022
Description of CL				
Project technology:				
1. Under section 1.11, it has been mentioned as the currently eligible ICS are: 1) Greenway Jumbo stoves and 2) Greenway stoves (e.g. Smart, Prime, Uno) a) PP to clarify whether all these stoves are to be distributed? b) If yes, PP to provide efficiency certificate obtained for 2) Greenway stoves. c) Further, it shall be clarified: (i) Whether ICS shall require a specific fuel (e.g. briquettes, pellets, woodchips), considering the justification of applicability condition number 5 in section 3.2 of the VCS PD.				
Project participant response		Date: 31/05/2022		

PP will only distribute Greenway Jumbo stoves and no other models of ICS will be used/distributed in the project activity, the same has been corrected in revised PD.

The proposed ICS to be employed doesn't require any specific type of fuel and same type of fuel will be used as in baseline i.e. firewood. The applicability condition number 5 in the section is applied for special cases if the end user uses briquettes, woodchips, etc. as a source of fuel which will be a rare scenario. The necessary corrections have been done in the revised PD for better clarification.

Documentation provided by project participant

Project Description v02

DOE assessment

Date: DD/MM/YYYY

PP has submitted revised PD which now indicates use and distribution of only one type of ICS which is Greenway Jumbo stoves. The same was also conformed from the declaration letter from Greenway Grameen Infra Pvt. Ltd.

Hence this part of CL is Closed.

CL ID	CL 05	Section no.	VCS PD	Date: 16/05/2022
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Description of CL

1. As mentioned in section 3.5 of VCS PD, the proposed project intends to distribute the ICS at 60% subsidy to users. However, during remote audit it has been confirmed that around 85% subsidy shall be provided by PP. In these line-
 - i. PP to provide clarification for the same and submit a valid purchase receipt/delivery note pertaining to the price of the ICS issued to the beneficiary as documentary evidence for the confirmation of the sale price.
 - l. Also, this term and condition is not being reflected in the initial project description in PD under section 1.1.

Project participant response

Date: 31/05/2022

The PP will distribute ICS with more than 60% subsidy to end users, which is appropriately incorporated in revised PD.

The same is also incorporated in section 1.1 of revised PD

Documentation provided by project participant

PD version-02

DOE assessment	Date: DD/MM/YYYY
PP has submitted revised VCS-PD which now states as “The SVPL will provide ICS to end users with more than 60% subsidy.”. However, - PP shall significantly mention and highlight in VCS PD, the cost price and the sales price of each ICS to be distributed for better traceability. - PP has submitted declaration form Greenway Infra Pvt Ltd which indicates the total cost price of ICS, however PP is requested to provide traceable financial/investment details of cost of production of cookstoves per unit incurred by supplier for the project cookstoves production (to asses actual cost price 3499/- INR) - As inferred from the supportive provided, the cost price of each ICS cited by Greenway Grameen Infra Pvt. Ltd. is indicated as 3499/- and invoice receipt issued to a prospective buyer is indicated as 400/-. PP to conform if this the subsidized module implied? - PP to reconfirm of the invoice issued dated 18 May 2022 is for the proposed project activity and the buyer is the listed beneficiary. Hence, this part of CL is OPEN.	
Project participant response	Date: 14/07/2022
• PP will initially purchase the ICS at an MRP of 3,499 INR and distribute them at a cost of 400-500 INR in the beginning. The supply chain cost, the maintenance and repair cost of the ICS are separate. So, PP intends to distribute the ICS at more than 60% subsidy to users. The same has been incorporated in the revised PD. • Greenway Grameen is ICS supplier for the project activity. SDG13 purchases the cookstove from Greenway Grameen. PP has no access to such requested data as they are confidential to Greenway Grameen. So, the requested details are not be available with the PP. • PP considers providing a subsidy to the end users for more than 60%. • Yes, the invoice issued dated 18 May 2022 is for the proposed project activity and the buyer is the listed beneficiary.	
Documentation provided by project participant	
VCS PD version 02	
DOE assessment	Date: DD/MM/YYYY
1. The cost price of the procured ICS has been indicated as 3,499 and the same has been conformed from declaration letter bu ICS manufactures. The sales invoice indicates the sale proce as 400/- , hence the subsidized % has been calculâted as aprox 85.5% which is more rhen 60% as claimed in VCS PD. The required informaiton has been now also included in updated VCS PD and accepted by verification team. Hence this part of CL is closed. 2. The justification provided by PP has been accepted as PP has no access to data asked as they are confidential to Greenway Grameen. Hence this part of CL is closed 3. As assesed in response above, the subsidized % has been calculâted as aprox 85.5% which is more then 60% as claimed in VCS PD. The required informaiton has been now also included in updated VCS PD and accepted by verification team. Hence this part of CL is closed. 4. The clarification provided by PP has been accepted, Hence this part of CL is closed Thus, CL 5 is now CLOSED.	

CL ID	CL 06	Section no.	VCS PD	Date: 16/05/2022
Description of CL				

1. Under section 2.1 of VCS PD, "No Net Harm",

- (i) Under aspect "Environmental", It is mentioned that "ICSs deliver 65% fuel savings and 70% smoke reduction while working on all solid biomass fuels." PP shall provide evidence to validate this.
- (ii) Under aspect "Environmental", It is mentioned that "The materials needed to manufacture the stoves only purchased from suppliers with high standards of manufacturing practices as evident in the certifications of their products." PP shall provide evidence to support this.
- (iii) PP will ensure safe collection/ disposal of the devices through their channel partners and ground team. PP shall clarify, what kind of mitigation measures will be taken for disposal of ICS after end of life? Also, after the end-of-life, whether the users will be provided with the new ICS.

Project participant response
Date: 02/06/2022

1. Several studies reported that the use of improved cookstove reduces fuel consumption significantly. Also, less the fuel burnt, less will be the smoke emission. Better the thermal efficiency, lesser will be the smoke emission. As per stated efficiency the project improved stove will reduce around 65% fuel consumption than traditional stoves, which directly lead to less smoke and less PM2 emissions. The same can be also concluded based survey conducted for other improved cookstoves
https://energypedia.info/wiki/Improved_Cookstoves_and_Energy_Saving_Cooking_Equipment
<https://thorax.bmj.com/content/73/11/1026#ref-3>
https://apps.who.int/iris/bitstream/handle/10665/43421/9241563168_eng.pdf
2. Evidence for the same is provided along with the response.
3. The material used for manufacturing of ICS does not contain any hazardous substances or material that can cause negative environmental impact. As ICS is manufactured using clay and Iron. The broken/ end-of-life ICS is collected at the collection facilities and recyclable part is recycled at the manufacturing facility and the non-recyclable part which is safely disposed of. No new ICS are provided to the user after the end-of-life of the ICS.

Documentation provided by project participant
[Survey reports](#)
DOE assessment
Date: 22/06/2022

1. The reference supportive provided by PP has been assessed by Verification team. The study "Improved Cookstoves and Energy Saving Cooking Equipment" by Energypedia refers to "Regarding ICS for fuelwood, savings between 25-65% per stove per household are realistic when used correctly. However, the statement –"70% smoke reduction while working on all solid biomass fuels" is not traceable. PP to conform and indicate the reference section for the same. **Hence this part of CL is OPEN.**
2. PP has submitted the Mill test report for the ICS and the same has been assessed by Verification Team. **Hence this part of CL is CLOSED.**

Project participant response
Date: 01/08/2022

1. Greenway Grameen ICS claims 65% fuel saving as well as 70% smoke reduction. The same can be cross checked from the following :
<https://economictimes.indiatimes.com/small-biz/entrepreneurship/playing-with-fire-how-greenway-provides-a-safer-alternative-to-cook-for-rural-india/bid-adieu-to-mud-chulhas/slideshow/67468138.cms>
<https://www.greenwayappliances.com/greenway-jumbo-stove>

Documentation provided by project participant	
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DOE assessment	Date: DD/MM/YYYY
1. Verification team has assessed the link of the data provided by PP as response to raised query confirming the values that ICSs will deliver 65% fuel savings and 70% smoke reduction while working on all solid biomass fuels. Hence this part of CL is CLOSED.	

Table 3. CAR from this validation/verification]

CAR ID	CAR 01	Section no.	VCS PD	Date: 16/05/2022
Description of CAR				
1. In accordance with requirement of applied methodology, for additionality, “For any project activity where stoves are not provided at zero cost to the end-user or has any other source of revenues other than the sale of GHG credits, then the project activity shall apply investment analysis method set out in the CDM Tool for the Demonstration and Assessment of Additionality.” Given this, PP is requested to justify use of “simple cost analysis” as the investment analysis method. 2. PP is required to provide supporting documents for investment analysis presented. 3. PP is required to justify how the common practice analysis presented in VCS PD meets the requirements of CDM TOOL-24 – Common Practice. 4. Under section 3.2, inline with VCS PD template requirement, PP to demonstrate and justify how the project activity(s) meets each of the applicability conditions of tools (TOOL30: Calculation of the fraction of non-renewable biomass) applied by the project.				
Project participant response		Date: 31/05/2022		
1. The proposed project intends to distribute the ICS more than 60% subsidy to users i.e. households; hence financial return from the programme will be less than cost incurred, further the project proponent has hired a team for supply chain and maintenance and repair. As each ICS has certain costs associated with the production/purchase, distribution, monitoring and verification etc., the programme will not occur in absence of the carbon revenue. The action is not financially viable without the support of revenues from the sale of VERs. As the end-user does not benefit from a direct financial return and procuring ICSs requires capital, which is a barrier to rural/semi-urban consumers due to difficulties in accessing capital, a wide dissemination of ICSs in the Host Country is unlikely. The actions under the project will alleviate these barriers by promoting distribution of ICSs to end-users at an affordable price. 2. Further analysis is not required pls refer above. 3. As per information available in public domain the penetration level of ICS is very low in host country, India and project activity is not a common practice. 4. The fNRB is calculated in line with applied tool Tool-30, please refer calculation details.				
Documentation provided by project participant				
PD Version-02				

DOE assessment	Date: 22/06/2022
1. As indicated in review above, PP shall significantly mention and highlight in VCS PD, the cost price and the sales price of each ICS to be distributed for better traceability of subsidy % provided. Hence this part of CL is OPEN. 2. PP has submitted declaration form Greenway Infra Pvt Ltd which indicates the total cost price of ICS, however PP is requested to provide traceable financial/investment details of cost of production of cookstoves per unit incurred by supplier for the project cookstoves production (to assess actual cost price 3499/- INR). Hence this part of CL is OPEN. 3. PP to indicate in VCS PD, if the step number 5 as identified in TOOL 24 Methodological tool - Common practice (Version 03.1) has been considered for Common practice analysis. Hence this part of CL is OPEN 4. Verification Team has assessed the fNRB calculation and has following observations- - In the provided ER calculation excel sheet, under tab "ER calculations", for the calculation of total ER_y, the formulae reflecting (row B 15) is $ER = By_{savings,i} * NCV_{biomass} * (EF_{w,CO2} + EF_{w,non CO2}) * fNRB * Ny_i * L_y$. However the value of fNRB has not been considered for calculation of ERs. PP to clarify the same. - The weblink source reported in ER sheet under tab "fNRB" is not accessible and given error while opening. - For fNRB assessment in ER sheet, the value for Total forest cover reported is "5813600 ha" Ref- SFR Chapter 9 -2.pdf (fsi.nic.in), where as if we see the supportive document provided by pp – Gender and Livelihoods Impacts of Clean Cookstoves in Odisha (source: https://rcdcindia.org/PbDocument/4a11b805c0141d9-f4d2-4d47-86ee-19fb11dd141fICS%20study%20-%20Final%20-%20Odisha%20-%202023-04-2014.pdf) in page number 7, the total Forest area reported is "48,903 sq km area according to the State of Forest Report, 2011". PP to clarify and confirm the values ascertained for fNRB calculation with assured source document. - The fNRB value is the calculated value as indicated by PP, however the parameter is not been reported in VCS PD under section 5. PP to clarify the same. Hence this part of CL is OPEN.	
Project participant response	Date: 14/07/2022

1. PP will initially purchase the ICS at an MRP of 3,499.00 INR and distribute them at a cost of 400.00 INR. The supply chain cost, the maintenance and repair cost of the ICS will be separate. So, PP intends to distribute the ICS at more than 60% subsidy to users. The same has been incorporated in the revised PD.
2. Greenway Grameen is ICS supplier for the project activity. It is not possible to acquire or provide any such requested documents or information as the same is not related to the project activity.
3. As per Appendix 1 of the applied approved methodology, in rural India only 12% of low-income groups, 22% of middle-income group and 35% of upper income group has access to clean fuels and technologies for cooking which mainly include LPG. The use of ICS in turn is having a lesser share. Also, step 5 of tool 24 is not applicable for the project.
4. fNRB
 - i) The value of fNRB has been considered for calculation of ERs in the submitted ER sheet. VVB is requested to check again and specify where its not applied.
 - ii) The Links were operational at the time of PD submission. However, the same are not operational now. Thus, the same has been replaced with new web-links.
 - iii) The value of the forest cover for calculation of fNRB has been taken from Forest Survey of India report. The same is correct and conservative.
 - iv) The fNRB parameter has been added in relevant sections of the revised VCS PD.

Documentation provided by project participant

VCS PD version 02

ER Sheet version 02

DOE assessment

Date: DD/MM/YYYY

1. PP has made the required inclusions about cost and sale price of ICS in the revised VCS PD under section 3.5 and the same has been assessed by Verification team. Hence this part of CAR is now **CLOSED**.
2. The justification provided by PP has been accepted by Verification team. . Hence this part of CAR is now **CLOSED**.
3. PP has submitted the revised VCS-PD with rephrased section under « Common Practice analysis». Verification team confirms that the raised query has been sufficiently addressed, Hence this part of CAR is now **CLOSED**.
4.
 1. PP has submitted the revised ER excel spreadsheet and the revised fNRB value (0.71) is correctly reflecting and has been implemented for calculations.
 2. The weblinks are now functional in the revised ER sheet under 'fNRB' tab.
 3. The justification provided by PP regarding fNRB values considered has been accepted by Verification team.
 4. Validation team confirms that the fNRB parameter is now been reported in VCS PD under section
Hence this part of CAR is now **CLOSED**.

CAR ID	CAR 02	Section no.	VCS PD	Date: 17/05/2022
Description of CAR				

1. Under section 1.7, Provide evidence of project ownership, in accordance with the VCS Program specifications on project ownership. 2. Under section 1.7, It is stated that “ <i>All the legal ownership of the project is with SDG13 Ventures Pte Ltd. When the ICS is handed over to a household, the participating household will sign a declaration to transfer the ownership rights of the carbon asset generated from the project to the project proponent</i> ”, PP to provide sample declaration form for validation.	
Project participant response	Date: 02/06/2022
1. Evidence for project ownership is attached along with the response 2. The declaration on the ownership rights of the carbon credits are signed along with the end user agreement only.	
Documentation provided by project participant	
<i>Project Ownership Document</i> <i>Sample end user agreement</i>	
DOE assessment	Date: 22/06/2022
1. PP has submitted the Ownership declaration statement dated 07/06/2022 which has been reviewed by Verification team. Hence this part of CAR is CLOSED. 2. Sample user agreement with beneficiary has been now provided and has been assessed. Hence this part of CAR is CLOSED. Thus, CAR 2 is CLOSED.	

CAR ID	CAR 03	Section no.	VCS PD	Date: 12/05/2022
Description of CAR				
1. Under section 2.4 of VCS PD, “Public Comments”, Details of Local stakeholder consultation meetings is wrongly included. As per VCS template guidelines, section should mention due account of any comments received during the public listing period in VERRA site has not been provided. provide the details of the comments received on 12 April 2022 as the document available on below link is not accessible. https://registry.verra.org/app/projectDetail/VCS/2868 2. Furthermore, under section 2.2, in line with template filling guidelines, PP to further clarify the mechanism for on-going communication with local stakeholders and also to provide evidence of sample communication that has been done with local stakeholders.				
Project participant response			Date: 31/05/2022	
1. No Comments were received by any stakeholders during the public comment period. Also, the LSC comments are now been removed from the section and added to the relevant sections in the revised PD. 2. Details of the project implementor/authorised personal were mentioned in the press release and during stakeholder consultation it was explained to attendees that any concern feedback related to usage or other can be communicated to project participant through local representative. Anyone who could/could not attend the meeting could raise their comments or queries on the contact information provided. The stakeholders present in the meet were also provided with the contact details of the project implementors, if they have a suggestion to improve the project and wish to raise any comments. The same has been incorporated in the revised PD.				

Documentation provided by project participant	
<i>PD version-02</i>	
DOE assessment	Date: 23/06/2022
1. PP has submitted revised VCS-PD and section 2.4 has been updated now. 2. In the revised PD, section 2.2 has now been updated with asked details. However, PP shall provide evidence of sample communication that has been done with local stakeholders. Hence this part of CAR is OPEN.	
Project participant response	Date: 02/08/2022
The LSC MOM has been already submitted to the VVB. Also, the press release is shared to VVB for further clarification.	
Documentation provided by project participant	
Press release doc.	
DOE assessment	Date: DD/MM/YYYY
2. PP has submitted the required evidence indicating stakeholder engagements and the same has been assessed by Verifaicon team. Hence this CAR 3 is now CLOSED .	

CAR ID	CAR 04	Section no.	VCS PD	Date: 17/05/2022
Description of CL				
1. Under section 1.17, PP has not provided a brief description as how the project contributes to achieving any nationally stated sustainable development priorities, including any provisions for monitoring and reporting same, in line with latest version of VCS- PD template requirement. 2. PP to provide and submit the SD-PD for assessment.				
Project participant response			Date: 31/05/2022	
1. Relevant changes as per the latest template is done in the revised PD. 2. The SD Vista PD is provided along with this response.				
Documentation provided by project participant				
Project Description v02				
SD Vista PD v01				
DOE assessment			Date: 23/06/2022	
1. PP has submitted revised VCS PD, and the section 1.17 has been now updated accordingly. 2. PP has now submitted SD-PD for assessment. Hence this CAR is Closed now.				
Project participant response			Date: 01/08/2022	
No response needed as the CAR is closed				

Documentation provided by project participant	
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DOE assessment	Date: DD/MM/YYYY

CAR ID	CAR 05	Section no.	VCS PD	Date: 12/05/2022
Description of CAR				
In the submitted VCS-PD,				
1. PP shall provide the project design as per the latest applicable template available on the website and conform to all the applicable template specific requirements. 2. In section 3.2, “application of methodology”, under project justification for requirement 4, the reference links provided in footnote 1 & 2 are not functional. 3. Under section 1.3 of VCS PD, in line with template filling requirements, PP to demonstrate and justify how the project activity(s) meets each of the applicability conditions of the latest applicable version of the methodology, and tools applied by the project. 4. Under section 1.3 of VCS PD, in line with template filling requirements, PP to describe and justify how the project is eligible under the scope of the VCS Program. PP to demonstrate and justify how the project activity(s) meets each of the applicability conditions of the latest applicable version of the methodology, and tools applied by the project				
Project participant response		Date: 01/06/2022 <i>(Please mention the date of your response to KBS)</i>		
1. The PD has been revised as per the latest applicable template requirements. 2. The reference source has been corrected. Working links have been attached in the revised PD. 3. The project activity is an energy efficiency project and is eligible as per VCS standard Version-4.2 4. The same is already included in PD, no additional details required.				
Documentation provided by project participant				
PD Version-02				
DOE assessment				Date: 23/06/2022
1. PP has submitted the revised VCS PD inline with latest template version and the same has been assessed by Verification team. Hence this part of CAR is now CLOSED. 2. The reference links provided in footnote 1 & 2 are now functional. Hence this part of CAR is now CLOSED. 3. As per template filling guidelines, under section 3.2, PP shall demonstrate and justify how the project activity(s) meets each of the applicability conditions of the tools applied by the project too. Address each applicability condition separately. Hence this part of CAR is OPEN. 4. As per VCS PD template requirement, under section 1.3 PP to <i>Describe and justify how the project is eligible under the scope of the VCS Program.</i> (justifying all applicable criteria as per para. 2.1.1 of the VCS Standard, V.4.2). Hence this part of CAR is OPEN.				
Project participant response				Date: 14/07/2022
3. All the applicability conditions that are applicable for the project activity has been justified in the VCS PD. 4. Template instructs to describe how the project the project activity is eligible which is already done in the VCS PD.				
Documentation provided by project participant				
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DOE assessment	Date: DD/MM/YYYY
3/4. PP has submitted revised PD and Verification team conforms that the applicability conditions and project eligibility are well defined in VCS PD and is as per template requirements. Hence this CAR is now CLOSED .	

CAR ID	CAR 06	Section no.	VCS PD	Date: 12/05/2022
Description of CL				
In the ER sheet provided and under section 5 of VCS PD-,				
1. In section 5.1, the parameter “Bold” is not included as per the methodology. PP to explain how is the quantity of firewood consumed in absence of project activity (B_{old}) shall be determined as the same is not reflecting in submitted PD under section 5.				
2. PP to provide conform and clarify with reference for the consideration of value for parameter $B_{y=1,new,i,j,survey}$ for the project activity as 1.35 tonne/device/year.				
3. The source of the data considered for ex-ante parameters has to be precisely mentioned (default source cited in applied methodology).				
4. The total number of ICS planned to be distributed is cited as 1,00,00 for ER calculations. PP to reconfirm and justify he number considered.				
5. In ER sheet, under tab “fNRB” , the reference source cited for consideration of “Number of households in 2011 – 96,05.629” is not functional.				
6. In section 5.3, “Monitoring Plan”, under “sampling frame”, the version no. mentioned for “Sampling and Surveys for CDM Project Activities and Programme of Activities” is not the latest one. Also, the value of confidence/precision is not consistent throughout. PP ro reconfirm the sampling procedure applied for the project activity.				
Project participant response		Date: 27/05/2022		
1. As per the applied methodologies VMR006 v1.1, $B_{y,savings,i,j}$ could be calculated either by eq. 3 or eq. 4. PP has chosen eq. 4 as the calculation method. So, calculation of B_{old} is irrelevant.				
2. 1.35 tonne/device/year is just an assumption. The real value will be determined in the 1 st year of the implementation of the project through sample survey.				
3. The source of data as applicable is referenced and rest as allowed by applied methodology is assumed based on experience/standard practice.				
4. The total number of ICS to be distributed is 100,000 ICS/year and total 500,000 ICS in 5 years.				
5. The reference source is corrected in revised ER sheet as https://www.censusindia2011.com/odisha-population.html				
6. The latest version of “Sampling and Surveys for CDM Project Activities and Programme of Activities” is used in revised PD, the reference to precision/confidence is corrected in PD in line with applied methodology and tool/guideline.				
Documentation provided by project participant				
PD Version-02				

DOE assessment	Date: 23/06/2022
1. In submitted PD, under section 4.4, it has been mentioned that the quantity of woody biomass saved $B_{y,savings,i,j}$ due to implementation of improved cook stoves will be estimated using Equations 4 of applied approved methodology. Hence calculation of Bold has been exempted. Hence this part of CAR is Closed. 2. As for the calculation of parameter- $B_{y=1,new,i,j,survey}$, PP has used the value of 1.35 t/device/year for ER calculations and has responded above that the source of this value is “<i>assumption by experience</i>”, which is not found to be agreeable. With reference to this- - PP shall precisely quote the exact literature/reference projects it has referred to assume the value to be 1.35 for traceability. - PP shall clarify and conform if it considers the requirement set in applied methodology- “<i>For projects opting for $B_{y=1,new,i,j,survey}$, it shall be demonstrated that the consumption of biomass for individual project stoves can be measured exclusive of one another</i>”. Hence this part of CAR is OPEN. 3. As indicated in CAR above, the source of the default parameters value cited in applied methodology needs to be mentioned in VCS PD, against the ex-ante parameters considered. Hence this part of CAR is OPEN. 4. PP has mentioned the total number of ICS to be distributed for the project activity and the same is reflecting in VCS PD. Hence this part of CAR is CLOSED. 5. As indicated above in CAR 1, In the provided ER calculation excel sheet, under tab “ER calculations”, for the calculation of total ER_y, the formulae reflecting (row B 15) is $ER = B_{y,saving,i} * NCV_{biomass} * (EF_{wf,CO2} + EF_{wf,non CO2}) * fNRB * N_{y,l} * L_y$. However the value of fNRB has not been considered for calculation of ERs. PP to clarify the same. Hence this part of CAR is OPEN. 6. In section 5.3, “Monitoring Plan”, under “sampling frame”, the applied version number mentioned (version 4) for “Sampling and Surveys for CDM Project Activities and Programme of Activities” is still not been updated to the latest version available. PP to reconfirm the sampling procedure applied version and value of confidence/precision applied for the project activity. Hence this part of CAR is OPEN.	
Project participant response	Date: 04/08/2022
2. The value 1.35 is just an assumption taken is to demonstrate the calculation. The actual value of $B_{y=1,new,i,j,survey}$ will be determined in the first year of project implementation with the help of project survey. The biomass is consumed by individual ICS separately and can be found out with the help of surveys in the first year of project implementation. 3. The values opted are default values that are provided in the applied methodology. Thus, the source referred is correct in the submitted VCS PD. 5. The value of fNRB has been considered for calculation of ERs in the submitted ER sheet. 6. PP has applied the latest version of Guidelines for Sampling and surveys for CDM project activities and programmes of activities. for Sampling and surveys for CDM project activities and programmes of activities.	
Documentation provided by project participant	
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DOE assessment	Date: DD/MM/YYYY

2. The justification provided by PP has been accepted as $B_{y=1,new,i,j,survey}$ will be determined in the first year of project implementation.
3. PP has submitted the revised PD and section 5.1 has been rephrased to indicate that Default value as per applied approved methodology VMR0006, v1.1 has been considered. The same has been assessed by Verification team and found satisfactory.
5. . PP has submitted the revised ER excel spreadsheet and the revised fNRB value (0.71) is correctly reflecting and has been implemented for calculations.
7. Validation team confirms that latest version of Guidelines for Sampling and surveys for CDM project activities and programmes of activities has been implied.
- Hence CAR 06 is **now CLOSED**.

CAR ID	CAR 07	Section no.	VCS PD	Date: 12/05/2022
Description of CL				
PP to provide an undertaking that PP shall not claim for GHG emission reduction credits for the given crediting period under any other emission-trading program or GHG binding limits				
Project participant response		Date: 27/05/2022		
The undertaking for the same is provided along with the responses.				
Documentation provided by project participant				
Declaration by PP				
DOE assessment			Date: 23/06/2022	
An undertaking has been provided by PP confirming the same and has been assessed by Verification team.				
Hence this CAR is now CLOSED.				

Table 4. FAR from this verification

1 FAR raised during this Validation

FAR ID	FAR 01	Section no.	<i>Insert reference of protocol</i>	Date: 25/05/2023
Description of FAR				
During the next Verification period the DOE shall ensure to cross check all the participating users have signed beneficiary agreement and hence are adhering to the requirement of the baseline scenario stated in the methodology and opted in PD.				
Project participant response				Date: DD/MM/YYYY

NA.	
Documentation provided by project participant	
NA.	
DOE assessment	Date: DD/MM/YYYY
NA.	

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