

Gold Standard for Global Goals Validation Report for Renewal of Crediting Period (Project activities)

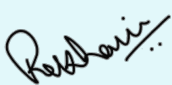
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GS ID	GS10797
Title of Project	Himalayan Rocket Stove Project in India
Version number of the Validation Report	2.1
Completion date of Validation Report	21 May 2025
Version number and completion date of the GS PDD to which this report applies	Version 10.1 of 13 May 2025
Start and end date of the renewed crediting period	05/07/2024 to 04/07/2029
Start and end date of the previous crediting period	05/07/2019 to 04/07/2024
Delay in renewal of CP	No
Project Developer	Swiss Carbon Value Ltd.
Project Representative	Swiss Carbon Value Ltd
Project Participants and any communities involved	Himalayan Rocket Stove Pvt. Ltd.
Host Country (ies)	India
Activity Requirements applied	☐ Renewable Energy Activity Requirements ☒ Community Services Activity Requirements ☐ Land-Use & Forests Activity Requirements ☐ New project types ☐ Others (<i>rules and requirements available in Principles and Requirements apply</i>)
Scale of the project activity	☐ Microscale ☐ Small scale ☒ Large scale

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	☐ Others																																
Methodology applied	<i>Title(s) of methodology (ies)</i>	Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC)																															
	<i>The version number of the methodology (ies)</i>	Version 4.0																															
Product Requirements applied	☒ GHG Emissions Reductions & Sequestration ☐ Renewable Energy Label ☐ Others <i>For all other Certification Statements, Certified SDG Impact Statements or Products.</i> Please specify: ☐ N/A																																
Project cycle	☐ Regular ☒ Retroactive																																
SDG Impacts Estimated	<table border="1"> <thead> <tr> <th>SDG Targeted</th><th>SDG Impact</th><th colspan="2">Estimated SDG Impacts</th></tr> </thead> <tbody> <tr> <td rowspan="8">SDG 13 Climate Action</td><td rowspan="8">Emission Reductions</td><td>Year</td><td>tCO₂ e</td></tr> <tr> <td>Jul 24-Dec 24</td><td>7,359</td></tr> <tr> <td>Jan 25-Dec 25</td><td>17,168</td></tr> <tr> <td>Jan 26-Dec 26</td><td>19,555</td></tr> <tr> <td>Jan 27-Dec 27</td><td>23,135</td></tr> <tr> <td>Jan 28-Dec 28</td><td>28,228</td></tr> <tr> <td>Jan 29-Jul 29</td><td>14,607</td></tr> <tr> <td>Total</td><td>1,10,053</td></tr> <tr> <td rowspan="3">SDG 7</td><td rowspan="3">Access to affordable and clean energy (number of households /system)</td><td>Year</td><td>Number (unit)</td></tr> <tr> <td>Jul 24-Dec 24</td><td>12,167</td></tr> <tr> <td>Jan 25-Dec 25</td><td>14,467</td></tr> </tbody> </table>			SDG Targeted	SDG Impact	Estimated SDG Impacts		SDG 13 Climate Action	Emission Reductions	Year	tCO₂ e	Jul 24-Dec 24	7,359	Jan 25-Dec 25	17,168	Jan 26-Dec 26	19,555	Jan 27-Dec 27	23,135	Jan 28-Dec 28	28,228	Jan 29-Jul 29	14,607	Total	1,10,053	SDG 7	Access to affordable and clean energy (number of households /system)	Year	Number (unit)	Jul 24-Dec 24	12,167	Jan 25-Dec 25	14,467
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			Jan 26-Dec 26	16,367	
			Jan 27-Dec 27	19,217	
			Jan 28-Dec 28	23,243	
			Jan 29-Jul 29	23,373	
	SDG 15	Life on land (Firewood saved)	Year	Tonnes	
			Jul 24-Dec 24	19,704	
			Jan 25-Dec 25	45,971	
			Jan 26-Dec 26	52,362	
			Jan 27-Dec 27	61,948	
			Jan 28-Dec 28	75,585	
			Jan 29-Jul 29	39,112	
Name of the VVB	EcoLance Pvt. Ltd.				
Name, Designation and Signature of the Approver from VVB	Rekha Menon  Director-EcoLance Pvt. Ltd.				

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Executive Summary

The project involves installation of Himalayan Rocket Stove in needy households primarily in the states in Himalayan region of India (Himachal Pradesh, Ladakh, Uttarakhand, Jammu and Kashmir, Meghalaya, Arunachal Pradesh, Assam, Manipur, Nagaland, Mizoram, Sikkim, and West Bengal). These stoves are used to meet two purposes: space heating and cooking. The use of these highly efficient stoves significantly reduces the firewood consumption of households and thereby reduction of greenhouse gas emissions because of reduced firewood consumption. The stoves are available in four capacities namely Eco mini, Eco1, Eco2 and Eco3. The project involves progressive installations and until the end of the first crediting period a total of 11,054 stoves were installed. In addition to the reduction of GHG emissions under SDG 13, the project intends to contribute positively benefits under SDG goal 7 and 15.

Scope of Validation

The validation scope is to review the updated GS-PDD against the GS principles and requirements. Validation of the renewal of crediting period is a requirement and it is seen as necessary to provide assurance about:

- (a) Changes in the Project as related to the GS General Eligibility Criteria
- (b) Incorporation of any relevant updates to the Gold Standard Requirements
- (c) Re-definition of Baseline Scenario and any impact of change on the Eligibility Principles, Criteria and Requirements
- (d) Any Gold Standard activity, product and methodology-specific Requirements
- (e) Demonstration of Ongoing Financial Need
- (f) the impact of new relevant national and/or sectoral policies and circumstances on the baseline;
- (g) the correctness of the application of an approved baseline methodology for the determination of the continued validity of the baseline or its update, and the estimation of emission reductions for the applicable crediting period.

Validation process

Validation is conducted using EPL's procedures in line with the GS requirements and principles and applying standard auditing techniques. The validation assessment involved a document review of relevant documentation, the interview and on-site assessment and reporting. Validation is not meant to provide any consultancy toward the project participants. However, stated request for clarifications and/or corrective actions may have provided input for improvement of the project activity.

Conclusion

EcoLance Pvt. Ltd. appointed by Swiss Carbon Value Ltd. has performed the validation of the renewal of crediting period of the GS project (GS 10797) 'Himalayan Rocket Stove Project in India', with regard to the relevant GS principles and requirements.

In conclusion, it is VVB's opinion that the GS project 'Himalayan Rocket Stove Project in India' (GS 10797) as described in the updated PDD version 10.1 of 13/05/2025, meets all relevant GS requirements and principles, and correctly applied the GS methodology 'Technologies and Practices to Displace Decentralized Thermal Energy Consumption' version 4.0. Hence, VVB request for renewal of the project for the second crediting period from 05/07/2024 to 04/07/2029.

Section 1: Validation Team

S.No	Role	Full name	Internal/ External Resource to VVB (INT/EXT)	Activities performed
1.	Team Leader/Technical Expert	Champok Buragohain	INT	☒ Desk review ☒ On-site audit ☒ Remote interviews ☒ Findings Preparation ☒ Report Preparation ☒ Sectoral scope issues ☒ Host country issues
2	Technical Expert/Trainee auditor	Dr. Samar Das	INT	☒ Desk review ☒ On-site audit ☒ Remote interviews ☒ Findings Preparation ☒ Report Preparation ☒ Sectoral scope issues ☒ Host country issues

As per GS rule update 'validation and verification by same VVB (RU 2020 PR-PR v1.2), since the previous verification for this project activity under the first CP is done by same VVB (EcoLance), the validation of RCP is done by a different team other than the team engaged for verification of the project. This is as per the above GS rule update requirement. The team performed previous verification from EcoLance is given below:

Sl.No	Role	Full name	Internal/ External Resource to VVB (INT/EXT)	Activities performed
1.	Team Leader/Technical Expert	Debarshi Das	INT	☒ Desk review ☒ On-site audit ☒ Remote interviews ☒ Findings Preparation ☒ Report Preparation ☒ Sectoral scope issues ☒ Host country issues
2	Technical Expert	Uddipta Nath	INT	☒ Desk review ☒ On-site audit

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				☒ Remote interviews ☒ Findings Preparation ☒ Report Preparation ☒ Sectoral scope issues ☒ Host country issues
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Section 2: Technical Review and Approval Team

S.No	Role	Full name	Internal/ External Resource to VVB (INT/EXT)	Activities performed
1.	Technical Reviewer	Prem Kumar Pokhrel	External	☒ Technical review ☒ Sectoral scope issues
2.	Approver	Rekha Menon	Internal	☒ Final review ☒ Decision making

Section 3: On-Site inspection

Activity performed on-site ¹	Site location	Date(s)	Team member								
Validate the project description and project ownership, legal status, technology measure. scale of the project	States: Arunachal Pradesh, <table><tr><td>Village(s)</td><td>Pangsa, Sangti, Choglamsar, Bema, Pangong, Tangtsa</td></tr><tr><td>City/Town</td><td>Dirang, Leh</td></tr><tr><td>State/Province</td><td>Arunachal Pradesh, Leh (Ladakh)</td></tr><tr><td>Country</td><td>India</td></tr></table>	Village(s)	Pangsa, Sangti, Choglamsar, Bema, Pangong, Tangtsa	City/Town	Dirang, Leh	State/Province	Arunachal Pradesh, Leh (Ladakh)	Country	India	29/11/2024, 30/11/2024, 01/12/2024-03/12/2024	Champak Buragohain & Dr. Samar Das
Village(s)		Pangsa, Sangti, Choglamsar, Bema, Pangong, Tangtsa									
City/Town		Dirang, Leh									
State/Province		Arunachal Pradesh, Leh (Ladakh)									
Country		India									
Assess the project boundary, start date, crediting period, baseline validity, applied methodology, Ongoing financial need											
Assess SDG outcomes, monitoring plan and ex ante parameters, emission reductions											
Stakeholder consultations, continuous input and grievance mechanism, safeguarding principles and Gender sensitive requirements											
Design changes if any											

¹ Add activities wherever necessary relevant to the project

Section 4: Remote Audit

N/A

Section 5: Interviews

Sl.No	Date	Full name	Company/ Organization	Topics discussed
1.	29-11-2024 to 30-12-2024	Vikash Yadav	South Pole	Purpose and objective of the audit, project design, baseline scenario, additionality of the program, planning and implementation of the project, Ex-ante parameters, emission calculation, monitoring plan of the project, stakeholder consultation
2.	29-11-2024 to 03-12-2024	Prakhar Badal	South Pole	
3.	30-11-24	Sreejith Lal J. S.	HRS Pvt. Ltd.	Continuous input and grievance mechanism, operation and maintenance procedure, monitoring plan, changes in the technology design
4.	30-11-24	N. Tashi	HRS Pvt. Ltd.	
5.	02-12-24	Tsewang Namgial	HRS Pvt. Ltd.	
6.	03-12-24	Chozang Namgial	HRS Pvt. Ltd.	
7.	03-12-24	Skalzang Zhamo	HRS Pvt. Ltd.	
S.No	Date	Full name/ Village	Type (Stakeholder/ End user)	Topics discussed
1.	29-11-24	Dorji Norbu/ Pangsa	Baseline users	Understanding of carbon program, co-benefits of the project, baseline technology, requirement of new technology, involvement in local stakeholder consultation, grievance mechanism, communication medium with the project developer and implementer
2.	29-11-24	Tsering Pema/ Pangsa	Baseline users	
3.	29-11-24	Tsering Drema/ Pangsa	Baseline users	
4.	29-11-24	Pan Tsering/ Pangsa	Baseline users	
5.	29-11-24	Pema Sangey/ Sangti	Baseline users	
6.	29-11-24	Sangi Choejom/ Sangti	Baseline users	
7.	29-11-24	Ahuja/ Sangti	Baseline users	
8.	30-11-24	Thurpa/ Sangti	Baseline users	
9.	30-11-24	Rinchin Dron/ Sangti	Baseline users	
10.	02-12-24	Tsering Dorje/ Choglamsar	Baseline users	

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11.	02-12-24	Konchok Chauba/ Bema	Baseline users	
12.	03-12-24	Thinles Norbu/ Pangong	Baseline users	
13.	03-12-24	Padma Namgyal/ Pangong	Baseline users	
14.	03-12-24	Konchok Mutup/ pangong	Baseline users	
15.	03-12-24	Dalden Namgyal/ Pangong	Baseline users	
16.	03-12-24	Nawang Gyaltsen/ Pangong	Baseline users	
17.	03-12-24	Tsering Yangdol/ Pangong	Baseline users	
18.	03-12-24	Rinjin Dorji/ Tangtsa	Baseline users	

Section 6: VVB Sampling Approach

PP's sampling approach:

For Baseline fuel consumption:

For determining baseline fuel consumption (Kitchen Performance Test), PP followed simple random sampling plan using 90/10 as confidence / precision. Further, the methodology provides specific guidance in section 4.4 and Annex 2 for this parameter. In line with the methodology, 90/10 confidence precision was followed and sample size above 30 is needed. Accordingly, PP conducted KPT in 30 random non-project users in March 2023 and a baseline survey covering 130 random samples in January 2024. As per section 4.3.3 of the applied methodology for baseline survey a sample size of minimum 100 is required for population above 1000. Therefore, the sampling approach and sample size taken by PP meets the methodology requirements.

For monitoring parameters:

For monitoring of applicable sampling parameters, PP proposed simple random sampling plan using 90/10 as confidence / precision for annual monitoring and biennial monitoring as per methodology /5/.

The parameters monitored through the sampling plan are:

- 1) $U_{p,y}$: Cumulative Usage rate for technologies in project scenario p in year y (fraction); This is a proportional parameter and monitored annually. Requirements and guidelines: Usage rate monitoring /11/ shall be followed.
- 2) $P_{b,y}$: Quantity of fuel that is consumed by project stoves in project scenario p during year y. This is a mean value parameter and monitored every two years, or more frequently (if applicable).

Detailed assessment is given in section 8.10 of this report.

EPL's validation of sampling approach:

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As per §24 of the Standard: Sampling and surveys for CDM project activities and programmes of activities (version 09.0) /9/, the validation team has to validate the project participant's sampling plan to determine whether it will provide parameter value estimates in an unbiased and reliable manner. The validation includes determining:

- a) Whether the proposed sample size and sampling method is adequate to achieve the minimum confidence/precision requirements;
- b) Whether the proposed sampling plan will ensure that samples are randomly selected and are representative of the population.

VVB noted the sample size calculation is as per Guidelines for Sampling and Surveys for CDM Project activities and Programme of Activities Ver. 4.0 (EB86, Annex 4) /8/ for proportional and mean value parameter. Also, methodology specifies minimum sample size (30) for baseline and project scenario fuel consumption monitoring (mean value) and 100 samples for proportional parameter. Therefore, VVB could reproduce the sample size as provided by PP following the calculation method and guidance provided in the applied methodology. Further, the sampling plan proposed to select samples randomly using online tool. Therefore, the sampling plan is found appropriate.

In order to validate the baseline fuel consumption, the audit team considered acceptance sampling in line with §26 & §28 of the Sampling Standard (version 09.0) /9/, the validation team has applied a sampling approach for on-site survey as part of validation.

Referring para 39 (a) of sampling standard, the audit team noted the estimated emission reductions of the project is 69,719 tCO₂e per year which is less than 100,000 tCO₂e and therefore, the validation team determined the sample size for acceptance sampling by evaluating the following, using its own professional judgment and guidance in the Standard 'Sampling and surveys for CDM project activities and programme of activities' version 09.0 /9/: Considering Acceptable Quality Level (AQL): 1.0% Unacceptable Quality Level (UQL): 20% and producer risk of 5% and consumer risk of 20% a sample size of 14 was determined referring the sampling Standard /9/. Acceptance number (c) thus determined for the sample size is 1. The audit team choose 14 samples randomly to validate the project activity. The validation team selected random samples considering both PP's sample record and non-sample record and visited total 18 baseline users. No inconsistency was observed for any of the 18 samples with respect to the observations in the field, interviews & document review.

Section 7: Desk/ Document review

The updated GS PDD version 7.0 of 07/11/2024, version 8.0 of 27/12/2024, version 9 of 30/12/2024 /01/, version 10 of 10/04/2025, version 10.1 of 13/05/2025 in particular the applicability of the methodology, the baseline determination, the emission reductions calculation /02/, the sustainability indicators, were assessed as part of the validation. All documents reviewed or referenced during the validation are listed in Appendix 1.

Section 8: Validation findings

8.1 Compliance of the PDD with the GS PDD template

Means of validation	Comparing the PDD /1/ with the PDD template provided by GS.
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Findings raised	CAR 3 was raised for inconsistency in reporting relevant information in completing the PDD which has been addressed in revised PDD and hence, CAR is closed.
Conclusion	EPL confirms that the updated PDD version 10.1 of 13/05/2025 is prepared using GS PDD template version 01.5 of 29/06/2023 which is the latest available template and completed with relevant information as per the template requirement.

8.2 Remaining FARs from Previous Review

There are no pending FARs to be addressed.

8.3 Description and Continuity of the project activity in the renewed crediting period

Means of validation	The project involves installation of Himalayan Rocket Stove (HRS) in households of the states in Himalayan region of India (Himachal Pradesh, Ladakh, Uttarakhand, Jammu and Kashmir, Meghalaya, Arunachal Pradesh, Assam, Manipur, Nagaland, Mizoram, Sikkim, and West Bengal). These stoves are used to meet two purposes: space heating and cooking. The use of these highly efficient stoves significantly reduces the firewood consumption of households and thereby reduction of greenhouse gas emissions because of reduced firewood consumption. The stoves are available in four capacities namely Eco mini, Eco1, Eco2 and Eco3. The HRS are product of Himalayan Rocket Stove Pvt. Ltd. (HRSPL) and entire manufacture, sale, installation and after sales service is managed by HRSPL. Himalayan Rocket Stove is a finely designed technology which mixes air and burning gases together inside a vertical insulated combustion chamber that allows temperatures to rise to a point where near-complete combustion occurs. This causes the smoke to be oxidized and converted to heat energy, which makes the stove both very efficient and clean burning. The hottest gases are carefully trapped inside the box in a way that maximizes the efficiency of the heating aspect of the stoves which then transmits to the room through the metal casing. The dimension of the stove varies, depending on the area of the installation and the number of people. The dimensions of each stove type are as follows: ECO mini: Height: 460mm, Width: 330mm, Length: 600mm ECO 1: Height: 500mm, Width: 450mm, Length: 840mm ECO 2: Height: 625mm, Width: 450mm, Length: 840mm ECO 3: Height: 825mm, Width: 450mm, Length: 840mm
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The technical specifications of all the models are cross checked from technical specification provided from manufacturer /12/ and also verified from site visit observations.

All the stoves has an technical life of 20 years as confirmed from manufacturer specifications /12/.

The installation of HRS under the project started from 05/07/2019 and until end of first crediting period (04/07/2024), a total 11,054 stoves were installed across different states (Himachal Pradesh, Ladakh, Uttarakhand, Jammu and Kashmir, Meghalaya, Arunachal Pradesh, Assam, Manipur, Nagaland, Mizoram, Sikkim, and West Bengal) as verified from sales and installation database /13/. The project is expected to install a cumulative of 23,373 HRS by end of second crediting period.

VVB confirms the project has been operating as per registered design.

Specific GS scope on design certification renewal:

As per paragraph 5.1.47 of GS4GG principle and requirement, the 'Design Certification Renewal scope is assessed as below:

- a) Changes in the Project as related to the General Eligibility Criteria
- There is no change in the project which may impact the project eligibility. The project is categorized under large-scale category and implemented within the same geographical boundary as the registered PDD.
- b) Incorporation of any relevant updates to the Gold Standard Requirements
- There is no relevant update found to be incorporated for the project during the second crediting period, except the latest version of methodology has been followed and its related applicable guidelines and tools.
- c) Re-definition of baseline scenario and any impact of change on the eligibility principles, criteria and requirements
- The project falls under community services activity and as per para Para 4.1.7 of "Community Service Activity Requirement" /7/, re-assessment of baseline is not mandatory for CSA project for first renewal. However, PD has assessed the baseline following UNFCCC guideline and confirms the existing baseline is still valid.
- d) Any gold standard activity, product and methodology-specific requirement
- The project meets community services activity requirements although there is no specific requirement to be met during the renewal of the project. The applied methodology for claiming emission reductions is updated to its latest version and conditions as per latest version is justified in the updated PDD.

	e) Demonstration of ongoing financial need, where relevant-see ongoing financial need - The project promoter considered carbon revenue as essential for penetration of the project and provided subsidized rate for the stoves. Also, there is free repair and maintenance to users within the warranty period. Therefore, there is ongoing financial need for the project activity during the second crediting period also. It is also noted no revenue is realised from Gold Standard certification during the first crediting period and therefore, as per section 4.1.52 (c) of GS principle and requirements, VVB has raised a FAR in this regard for next issuance. As per para 5.1.45 of GS4GG principles and requirement, to maintain Gold Standard Certified Project status beyond five years, a Project must undergo Design Certification Renewal. The second crediting period for the project starts from 05/07/2024 – 04/07/2029, immediately after the end of the first crediting period (05/07/2019 to 04/07/2024). The project life is 20 years and completed only five years by the first set of commissioned stoves. Hence, project systems has life until end date of second crediting period. Therefore, the project is eligible for second crediting period.
Findings raised	N/A
Conclusion	EPL confirms that the project participant listed in the updated project design documents are consistent with the contact information provided in the respective section. Furthermore, it verifies that the second crediting period, as per GS rules, starting from 05/07/2024 to 04/07/2029, correctly and clearly defined with compliance to all the principle and requirements. As per GS deviation (DEV#772), the project has been granted extension until 31/12/2024 to submit documents for design certification renewal without loss of credits /14/. Hence, the project developer is eligible to claim the second crediting period of the project commencing from 05/07/2024.

8.4 Applicability of the methodology/ tool

Means of validation	The project applied Gold Standard methodology reduced emissions from cooking and heating 'Technologies and practices to displace decentralized Thermal energy Consumption(TPDDTEC), ver.4.0 /5/. The applicability conditions of the methodology are discussed below: Applicability Condition 1: Project shall choose a technology design that has predictable performance in that it is proven to be efficient and durable under field conditions; for cookstoves, the rated thermal efficiency shall be at least 20%. VVB's Assessment –
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	The project promotes efficient firewood based stoves for heating and cooking purposes dedicatedly manufactured by Himalayan Rocket Stove Ltd. All four models of stoves under the project has efficiency of around 40% which has been confirmed from technical specifications provided by manufacturer /12/. Hence, the applicability condition is met. Applicability Condition 2: The technology shall have continuous useful energy output of less than 150kW per unit. VVB's Assessment – The project promotes 4 models of stoves with efficiency of 49%. The useful energy output per unit is calculated considering the baseline firewood consumption reference to the model of the stove which is less than 150kW as verified from the calculations provided in emission reduction worksheet /2/. Hence, the applicability condition is met. Applicability Condition 3: The project activity is implemented by a project developer and can include additional project participants listed in Appendix 2 of the PDD template. The individual households and institutions may be represented collectively by community organizations, etc., but do not individually act as project participants. VVB's Assessment – The project activity is implemented by Himalayan Rocket Stove Pvt Ltd. (HRSPL) & Project represented (developed) by Swiss Carbon Value Ltd. VVB checked the same from the implemented stove database/sales records /13/ confirming the project stoves are implemented by Himalayan Rocket Stove Pvt Ltd. Agreement between HRSPL and Swiss Carbon checked by VVB and found to be valid /15/. Swiss Carbon is also the developer of the project. The information is also correctly mentioned in Appendix 2 of the PDD. Applicability Condition 4: The project developer must design incentive mechanism(s), which should be effective as fast as possible, for the elimination of inefficient baseline stoves that are replaced by the project cooking devices and describe the incentive mechanism(s) in the PDD/VPA-DD at the time of validation. VVB's Assessment – For elimination of baseline stoves, PP has introduced subsidy in stove cost and accordingly provided 2 years free maintenance. This has been checked from sales invoice and warranty cards for project HRS /16/. PP shall also conduct survey to check the elimination of baseline stoves. Applicability Condition 5: To avoid double counting or double claiming, the project developer must: clearly communicate its ownership rights and intention of claiming the emission reductions resulting from the project activity to the following parties by contract or clear written assertions in the transaction
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	paperwork: all other project participants; project technology manufacturers; and retailers of the project technology or the renewable fuel in use; and ii. inform and notify the end users that they cannot claim emission reductions from the project, and iii. exclude from the project activity, cooking devices included in any other voluntary market or CDM project activity/PoA, and strive not to displace the cooking devices of another CDM or voluntary project/PoA. See data and parameters not monitored, Avoidance of double counting or double claiming with other mitigation actions, for details on this demonstration. VVB's Assessment – PP has clearly communicated to the stakeholders that PP will claim emission reduction ownership rights through carbon rights transfer agreement /16/. HRSPL is the manufacturer of the project technology and mostly distribute the project stoves to users through stores/online system and also with the help of dealers. The users are fully aware that carbon ownership rights will be transferred to project implementer as indicated in user agreement. The audit team checked sample end users agreements /16/ and confirm the avoidance of double counting measures are in place. Applicability Condition 6: Project activities making use of solid fossil fuel in the project scenario or other improved fossil fuel cookstoves meeting certain conditions described in the footnote to Table 1 (e.g. switch from three-stone fire biomass stoves to LPG stoves) may only claim emission reductions for energy efficiency improvement aspect and shall assume the same baseline and project fuel for emission reduction calculations. VVB's Assessment – The project technology uses only firewood as fuel. This has been confirmed from technical specifications of the project technology /12/ and as checked during on-site visits. Hence, this condition is not applicable. Applicability Condition 7: Project activities making use of solid fossil fuel in the project scenario or other improved fossil fuel cookstoves meeting certain conditions described in the footnote to Table 1 (e.g. switch from three-stone fire biomass stoves to LPG stoves) may only claim emission reductions for energy efficiency improvement aspect and shall assume the same baseline and project fuel for emission reduction calculations. VVB's Assessment – The project technology uses only firewood as fuel. This has been confirmed from technical specifications of the project technology /12/ and as checked during on-site visits. Hence, this condition is not applicable.
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	Applicability Condition 8: Project activities making use of a new solid biomass feedstock in the project situation (e.g. switch to green charcoal or renewable biomass briquettes) must comply with relevant specific requirements for biomass related project activities, as defined in the latest version of the Community Services Activity Requirements. The specific requirements apply to both plantations established for the project activity and/or existing plantations that will supply biomass feedstock. VVB's Assessment – The project does not switch to new biomass fuel. The baseline and project fuel is firewood. This has been confirmed from technical specifications of the project technology and as checked during on-site visits. Hence, this condition is not applicable. Applicability Condition 9: Adequate evidence is supplied to demonstrate that indoor air pollution (IAP) levels are not worsened compared to the baseline, and greenhouse gases emitted by the project fuel/stove combination are estimated with adequate precision. Furthermore, for projects where cooking will move from outdoor to indoor or where the project technology reduces ventilation (for example, changing from a stove with chimney to improved stove with no chimney), indoor air pollution (IAP) levels shall not worsen in the project compared to the baseline, including PM 2.5 and carbon monoxide (CO) emissions. This may be demonstrated before project Design Certification or during project operation using the certification resulting from of a manufacturer's test, report of field testing of the technology's PM 2.5 and carbon monoxide (CO) emissions, report of lab testing of the technology, or results of modelling of the technology's operation under field conditions. If none of these are available, reference from published literature or report by independent agencies may be used as evidence, provided it is not more than 5 years old. VVB's Assessment – Indoor air pollution is not worsened. The validation team checked the test report from third party 'Shivalik Solid waste management Limited' which mention that particular matter from project stoves (11 mg/Nm³) /4/ is much lesser than standard limits (150 mg/Nm³). Hence, applicable condition is justified.
Findings raised	N/A
Conclusion	The audit team hereby confirms that the selected baseline and monitoring methodology has been previously approved by the Gold Standard, and is applicable to the Project, which complies with all the applicability conditions therein and the selected version is valid at the time of submission of the proposed project activity for renewal of crediting period. It is also confirmed that the methodology is correctly applied by comparing it with the actual text of the applicable version of the methodology and there is no deviation from the selected methodology.

8.5 Validity of the Original baseline and Updates

Means of validation	As per para 5.1.47 of Gold Standard for global goals principles & requirement 're-definition of Baseline Scenario' is required at design renewal. The project developer has included the assessment of the validity of the original baseline as discussed below: VVB referred the tool "Assessment of the validity of the original/ current baseline and update of the baseline at the renewal of a crediting period", Version 3.0.1 /10/. The tool consists of two steps. The first step provides an approach to evaluate whether the current baseline is still valid for the next crediting period. The second step provides an approach to update the baseline in case that the current baseline is not valid anymore for the next crediting period. Step 1: Assess the validity of the current baseline for the next crediting period Step 1.1: Assess compliance of the current baseline with relevant mandatory national and/or sectoral policies There is no mandatory legal requirement for use of any specific fuel for cooking and heating needs in domestic sector in India. In India, at least 67% households use firewood for cooking needs (Report 'State of clean cooking energy access in India' by Council on Energy, Environment and Water /17/). In May 2016, Ministry of Petroleum and Natural Gas (MOPNG), Govt. of India introduced the 'Pradhan Mantri Ujjwala Yojana' (PMUY) as a flagship scheme with an objective to make clean cooking fuel such as LPG available to the rural and deprived households which were otherwise using traditional cooking fuels such as firewood, coal, cow-dung cakes etc. /18/. The above policy only provides subsidy for the taking LPG connections and do not provide any obligations or enforced targets, nor do they ban the use of fuel wood for cooking. Therefore, relevant policies do not impact the original baseline. Step 1.2: Assess the impact of circumstances In the absence of the project, firewood would have been used for cooking and heating purpose as evident from recent baseline survey /19/. There are no new national/sectoral policies/legislation/circumstance that could affect the baseline scenario during the renewal of the crediting period. There is no change observed in this regard and it can be concluded that the conditions used to determine the baseline emissions in the previous crediting period are still valid.
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Step 1.3: Assess whether the continuation of use of current baseline equipment(s) or an investment is the most likely scenario for the crediting period for which renewal is requested.

The baseline scenario identified at the validation of the project activity was the continuation of the current practice without any investment. The continuation of the current practice does not need any further investment. The baseline scenario identified during validation confirmed that NRB is used in India since decades. A recent baseline survey by PP in 2024 /19/ confirms the NRB use. These scenarios justifies that the baseline scenario is not impacted during the renewal of crediting period and continuation of pre-defined baseline scenario is the most likely scenario for the crediting period for which renewal is requested.

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

“Where emission factors, values or emission benchmarks are used and determined only once for the crediting period, they should be updated, except if the emission factors, values or emission benchmarks are based on the historical situation at the site of the project activity prior to the implementation of the project and cannot be updated because the historical situation does not exist anymore as a result of the CDM project activity”.

Following data parameters are updated from registered PDD:

Data/Parameter	Value in registered PDD		Value in updated PDD		Assessment
Quantity of fuel that is consumed in baseline scenario b (kg/household-day)	Stove type	Value	Stove type	Value	In line with methodology requirement, KPT was done in sample non-project users and accordingly the resulted values are taken. The assessment is give below.
	Eco Mini	36	Eco Mini	38.83	
	Eco 1	36	Eco 1	39.11	
	Eco 2	62	Eco 2	53.81	
	Eco 3	79	Eco 3	68.17	
Fraction of woody biomass that can be established as non-renewable biomass (f_{NRB})	90%		30%		Fraction of woody biomass that can be established as non-renewable biomass (f_{NRB}) is taken as default value of 30% as per TOOL 33 /27/.

Baseline survey:

PP conducted a baseline survey along with a baseline firewood consumption check in absence of the project scenario in January-March 2024 /19/. PD conducted simple random survey in project region (primarily in Himalayan region of India) in 130 households which is more than required sample of 68 if calculated as per UNFCCC CDM Guideline “Sampling and surveys for CDM project activities and programmes of activities” v 4.0 for an equivalent project population of 11,054. Further, as per the applied methodology minimum 100 samples are required for usage survey for population above 1000 and at a minimum 30 samples. Therefore, the sample size of 130 is correct. PD selected random users who are not part of the project. As per the survey, the baseline users found to be using traditional Bukhari stoves using firewood as fuel. Depending on the size of rooms firewood consumption varies; which PP compared to its equivalent project stoves. The results are given below:

No. of baseline Users Surveyed Bukhari Stove users	Average Room Size in ft	Wood burnt in a day (kg/day)	Equivalent Project Stove Type
48	Up to 14 ft X 20ft	42	Eco mini
49	10X12 to 16X16	42	Eco 1
26	16X18 to 22X16	60	Eco 2
7	22X26 to 26X20	78	Eco 3

Also, specific Kitchen Performance Test (KPT) was done in 30 random non-project users in March 2023. As per applied methodology 30 samples are recommended for KPT. Accordingly, PD selected random users who are not part of the project and KPT was done for 3 days. Depending on the size of rooms firewood consumption varies; which PP compared to its equivalent project stoves and results are presented with a outlier analysis. The conservative values from outlier analysis is given below:

Average Room Size in ft	Stove Type	Wood burnt in a day (kg/day)
Up to 14 ft X 20ft	Eco Mini	38.83
10X12 to 16X16	Eco 1	39.11
16X18 to 22X16	Eco 2	53.81
22X26 to 26X20	Eco 3	68.17

Therefore, comparing both results from survey in 2023 and 2024, PP considered conservatively the lower value for baseline fuel consumption. The audit team checked the KPT test results from original test forms /21/, survey forms /19/ and cross checked the same during site visit interview with end users. VVB confirms the results to be correct and consistent. The audit team also noted slight variation in reported baseline fuel consumption form the registered PDD which is accepted noting the field test are subject to some expected variations. The audit team also noted calibrated weighing scales and moisture meters were used while conducting these field tests.

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	Fraction of Non-renewable Biomass (fNRB): fNRB is taken as 30% default in line with TOOL 33 'Default values for common parameters' /27/ in referred in TOOL 30 'calculation of the fraction of non-renewable biomass' version 3.0 /20/.
Findings raised	CL 6 was raised and closed as discussed in Appendix 2 of this report.
Conclusion	The audit team concludes that the original baseline is valid and assessment is done as per methodological tool 'Tool for the assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period v3.0.1'. The assessment meets VVS Standard version 03 and GS principle and requirements paragraph 5.1.47. Moreover, the project falls under 'GG4GG Community Services Activity Requirements' and Para 4.1.7 of "Community Service Activity Requirement" /7/ has not made re-assessment of baseline mandatory for CSA project for first renewal.

8.6 Ongoing Financial need

Means of validation	As per section 4.1.52 of GS principle and requirements, version 2.0, ongoing financial need shall be demonstrated at design certification renewal. The project promoter considered carbon revenue as essential for penetration of the project and provided subsidized rate for the stoves. Also, there is free repair and maintenance to users within the warranty period. The sale price of stoves are approximately 25% lower than the landing price considering all the expenses and the loan to repay. This has been verified from declaration from PP and annual statements & outstanding loan details associated with the project. The project involves a huge loan in implementation which was planned to recover from the sale of carbon credit only. VVB checked the loan agreement (confidential) to confirm the liability involved in the project and the need for finance to continue the project. In terms of carbon certification cost and carbon revenue, it is inappropriate to provide any proportion or absolute value given the fact, these are market driven and always varies from time to time. However, any revenue from carbon will help in meeting the gap between sale price and associated carbon certification cost. Therefore, in VVB's opinion, the project is in need of Ongoing Finance for its sustainability and market penetration. It is also noted no revenue is realised from Gold Standard certification during the first crediting period and therefore, as per section 4.1.52 (c) of GS principle and requirements, VVB has raised a FAR in this regard for next issuance.
Findings raised	N/A
Conclusion	EPL has confirms that the ongoing financial support is necessary to ensure the continued penetration of the project activity.

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8.7 Data and parameters fixed ex ante

Means of validation				
	Parameter		Quantity of fuel that is consumed in baseline scenario b (kg/household-day)	
	Value	Stove type	Value	
		Eco Mini	38.83	
		Eco 1	39.11	
		Eco 2	53.81	
		Eco 3	68.17	
	VVB Assessment	The reported values are based on baseline survey following procedure as per applied methodology and assessment provided in section 8.5 above.		
	Parameter		Fraction of biomass used in the absence of the project activity in year y: $f_{NRB,y}$ (%)	
	Value	30%		
	VVB Assessment	The f_{NRB} is taken as default value from TOOL 33 'Default values for common parameters' /27/.		
	Parameter		CO ₂ emission factor of the fuel that is substituted or reduced: $EF_{b, fuel, CO_2}$ (tCO ₂ /TJ)	
	Value	Wood= 112		
	VVB Assessment	The value is as per IPCC default for Wood/Wood Waste provided in the applied methodology.		
	Parameter		Non-CO ₂ emission factor of the fuel that is substituted or reduced: $EF_{b, fuel, non-CO_2}$ (tCO ₂ /TJ)	
	Value	0		
	VVB Assessment	PP has considered this to be zero as no significant non-CO ₂ emissions occur in the baseline scenario. This is consistent with registered PDD and hence accepted.		
	Parameter		Net calorific value of fossil fuels used in the baseline scenario: $NCV_{b, fuel}$ (TJ/tonne)	
	Value	Wood= 0.0156		
VVB Assessment	The value is as per IPCC default for Wood/Wood Waste provided in the applied methodology.			

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	Parameter	LE _{p,y} : Leakage in project scenario p during year y (tCO ₂ e per year)	
	Value	Adjustment factor: 0.95 (5% of emission reduction)	
	VVB Assessment	The value is default as per applied methodology.	
Findings raised	Not Applicable		
Conclusion	VVB is able to confirm that the Data and parameters fixed ex ante are consistent with applied methodology and registered PDD.		

8.8 Data and parameters to be monitored (other than SDGs)

Means of validation			
	Parameter/ Unit	P _{p,y} : kg/household-day	
	Description of Parameter	Quantity of fuel that is consumed by project stoves in project scenario p during year y	
	Value	Stove	Fuelwood (Kg/Hr)
		Eco mini	22
		Eco 1	22
		Eco 2	30
		Eco 3	38
	Source of data	The reported value is as per previous survey/field test.	
	Validation methods/calculation/measuring frequency	The fuel (firewood) consumption in project scenario shall be monitored following sampling approach and field test shall be done on selected samples. Updated every two years, or more frequently The KPT values are valid for two years and may be applied for before or after period, however the gap between start date of first KPTs and second KPTs shall not be more than two years. Annex 2 of applied methodology /5/ shall be followed.	
	Parameter/ Unit	U _{p,y} : %	
	Description of Parameter	Usage rate in project scenario p during year y	
	Value	75%	
	Source of data	Ex-ante PP has considered mandatory level monitoring requirement as per GS 'Cookstove usage rate guideline' version 2 and considered 75% usage rate.	

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	Validation methods/calculation/measuring frequency	PP shall follow annual monitoring following sampling approach as per the applied methodology and comply Cookstove usage rate guideline' version 2 to claim the usage rate.
	Parameter/ Unit	N _{p,y} : days
	Description of Parameter	Project technology-days in the project database for project scenario p through year y
	Value	2670842 (annual average for the entire crediting period)
	Source of data	Calculated from the Project database as the sum of the number of project technology units times the calendar days during the year y that they were present at the end user locations.
	Validation methods/calculation/measuring frequency	The monitoring approach is as per applied methodology requirements. The results shall be cross checked from the usage survey with the contents of the project database to confirm whether the project technology units surveyed are present at end user locations as expected, or not.
	Parameter/ Unit	Avoidance of double counting or double claiming among project technology end users
	Description of Parameter	Evidence of avoidance of double counting or double claiming with project technology end users
	Value	NA
	Source of data	Evidence of informing / notification of end users, such as: - leaflets distributed with the warranty card of the product alerting end-users to the waiving of their carbon rights in exchange for discount pricing of the improved technology below its true cost, - carbon title waiver forms signed by end users, etc.

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	Validation methods/calculation/measuring frequency	PP has carbon title waiver forms signed with end users as checked for installed project systems. The same shall be followed for subsequent installations during the crediting period.
	Parameter/ Unit	Presence of stove stacking
	Description of Parameter	Descriptive statistics of the presence and usage practices of baseline- and other non-project-technology by project technology end users
	Value	NA
	Source of data	Use one of the following methods: - Measurement campaigns shall be undertaken using data loggers such as stove utilization monitors (SUMs) which can log the operation of all devices in order to determine the average device utilization intensity, or - Usage Survey- use of other stoves, to capture cooking habits and stove usage of households in the region, including quantification of use of baseline devices, by formulating questions and/or collecting evidences to determine the frequency of usage of both the project devices and baseline devices, or monitoring surveys to capture the number of meals cooked. The surveys may be integrated with the usage survey.
	Validation methods/calculation/measuring frequency	The approach is as per applied methodology and accounted for calculation of emission reductions.
	Parameter/ Unit	SFC _{p,y} : tons/technology*day
	Description of Parameter	Specific fuel savings for an individual project technology of baseline b/project p pair in year y
	Value	Updated every two years, or more frequently
	Source of data	Calculated from P _{b,y} , P _{p,y} and other information to obtain the savings in the required units.

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		Cross-check with proportional efficiency of baseline and project technology. For example, if the baseline stove efficiency is 10% and the project rated efficiency is 25%, the savings should reflect a factor of 2.5 approximately in the first year of the crediting year and not more. If it is more, then the value is capped based on the proportional efficiency.	
	Validation methods/calculation/measuring frequency	The approach is as per applied methodology and accounted for calculation of emission reductions.	
	In addition, the monitoring plan includes monitoring of Total sales or dissemination records and Project Database as per procedure and requirements of the applied methodology. VVB noted, PP has been maintaining sales records and project database which can be cross checked with sales invoice/installation certificates.		
Findings raised	CL 7 was raised and closed as discussed in Appendix 2 of this report.		
Conclusion	The validation team confirms that the monitoring plan complies with the requirements of applied GS methodology /5/ and the monitoring arrangements described in the monitoring plan are feasible within the project design and that the PP is able to implement the described monitoring plan.		

8.9 SDG Outcomes

Means of validation	SDG 7	Access to affordable and clean energy services	
	Description of Indicator	Number of Himalayan rocket stoves operational under the project activity (SDG 7.1.2)	
	Value	23,373	
	Source of data	Sample survey to confirm if HRS stoves are operational. Operational status will confirm that the users are accessed to affordable and clean energy and proportion of user's reliance on clean fuel and technology.	
	Validation methods	VVB confirms the identified SDG and its indicator are correct for the project activity.	

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		The SDG identified during registration of the project is applicable for the second crediting period. The monitoring procedure is as per applied methodology requirements. Total number of project systems can be cross checked with sales record/project database.	
	SDG 15	Biomass saved	
	Description of Indicator	Amount of biomass saved in year y (SDG 15.1.2- Life on land)	
	Value	58,936 ton/year (annual average for the entire crediting period)	
	Source of data	KPT Test/ usage survey	
	Validation methods	VVB confirms the identified SDG and its indicator are correct for the project activity. The SDG identified during registration of the project is applicable for the second crediting period. Biomass saved will be calculated based on the quantity of firewood used per day for cooking and heating in the baseline and project scenario by conducting KPT following procedure in Annex 2 of the applied methodology /5/. Implementation of the project eventually decrease the firewood consumption compared to baseline scenario. This will reduce the pressure on the forest land in the project area. The use of project stoves will reduce the quantity of firewood use tremendously in the long run and decrease in firewood demand will eventually reduce the adverse impacts on forests.	
Findings raised	NA		
Conclusion	EPL confirms that the sustainable development monitoring plan included in the updated PDD is in consistent with GS principles and requirements and registered PDD and feasible within the project design.		

8.10 Implementation of Sampling plan

Means of validation	PP has proposed a sampling plan to monitor below parameters in line with the applied methodology TPDDTEC version 4 /5/: 1) $U_{p,y}$: Cumulative Usage rate for technologies in project scenario p in year
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y (fraction); This is a proportional parameter and monitored annually. Requirements and guidelines: Usage rate monitoring /11/ shall be followed.

- 2) $P_{b,y}$: Quantity of fuel that is consumed by project stoves in project scenario p during year y. This is a mean value parameter and monitored every two years, or more frequently (if applicable).

Relevant requirements for sampling in the latest version of the CDM Standard for sampling and surveys for “CDM project activities and programme of activities” /9/ shall be followed for the project monitoring survey. Also, “Requirements and Guidelines for carrying out usage surveys for projects implementing improved cooking devices” /11/ shall be followed. The survey will be carried as per Level A, Mandatory Requirements. Furthermore, Annex 2 requirements of the applied methodology shall be followed for the mean value parameter to conduct the field test (KPT) for the project activity /5/.

Target population: Target population is the entire project systems covered under the project activity.

Sampling method: Simple random sampling shall be followed as the population is homogeneous in terms of technology, baseline scenario, targeted users profile. Hence, simple random sampling is correctly identified.

Sample size: For proportional parameter (Cumulative Usage rate) sample size shall be calculated following 90/10 confidence precision applying formula given below:

$$n \geq \frac{1.645^2 N \times p(1-p)}{(N-1) \times 0.1^2 \times p^2 + 1.645^2 p(1-p)}$$

Where:

n	= Sample Size
N	= Total number of Households
P	= Our expected proportion
1.645	= Represents the 90% confidence required
0.1	= Represents the 10% relative precision

For mean value parameter (Quantity of fuel that is consumed by project stoves in project scenario p) 90/10 confidence precision shall be followed and Annex 2 of applied methodology guidance shall be followed.

In any case, for both the parameters minimum 30 samples for project technologies of each age cohort being credited, except where the age cohort comprises fewer than 30 units (in which case all units shall be sampled).

	Therefore, a minimum total sample size is 100, with at least 30 samples for project technologies of each age being credited in the project scenario will be monitored at the time of monitoring. Implementation: Preparation and pre-testing of the survey questionnaire will be done in line with the guidance provided under section 4.3 & 4.4 of the TPDDTEC methodology Version 4 /5/. Random selection of sample from the database with the help of online random number generator shall be used. Field personnel will be trained to conduct the surveys so as to ensure the quality of data collected is high.
Findings raised	N/A
Conclusion	VVB confirms: - The sampling plan presents a reasonable approach for obtaining unbiased, reliable estimates of the variables - The population is clearly defined and the proposed approach to developing the sampling frame represent that population - The proposed sample size is adequate to achieve the minimum confidence/precision requirements. - The data collection/measurement method likely to provide reliable data given the nature of the parameters of interest and project. - The sampling frame contain the information necessary to implement the sampling approach.

8.11 Calculation of Baseline emissions

Means of validation	The Baseline emissions are estimated as per equation 1 of GS methodology ‘Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 4”, version 4 as follows: $ERY = \sum_{b,p} (N_{b,p,y} \times U_{p,y} \times SFS_{p,b,y} \times NCV_{b,fuel} \times (f_{NRB,b,y} \times EF_{b,f,CO2} + EF_{b,f,nonCO2})) - \sum LE_{p,y}$ Where: Where: ER_y = Emission reduction for total project activity in year y (tCO_{2e}/yr) $\sum$ = Sum over all relevant baseline b/project p pairs $N_{b,p,y}$ = Number of project technology-days included in the project database for baseline b/project p pair in year y (days) $U_{p,y}$ = Cumulative Usage rate for technologies in project scenario p in year y (fraction).
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	$SFS_{p,b,y}$ = Specific fuel savings for an individual project technology of baseline b/project p pair in year y (mass or volume units/technology*day) $NCV_{b,fuel}$ = Net calorific value of the fuel(s) that is substituted or reduced in baseline b (TJ/mass or volume units) $f_{NRB,b,y}$ = Fractional non-renewability status of woody biomass fuel during year y (fraction). For biomass, it is the fraction of woody biomass that can be established as non-renewable. This parameter is omitted when f is a fossil fuel. $EF_{b,f,CO2}$ = CO₂ emission factor from use of fuel f (tCO₂/TJ) $EF_{b,f,nonCO2}$ = Non-CO₂ emission factor arising from use of fuel f, when the baseline fuel f is biomass or charcoal (tCO₂e/TJ). This parameter is omitted when f is a fossil fuel. $LE_{p,y}$ = Leakage for project scenario p in year y (tCO₂e/yr); 5% For $N_{b,p,y}$, PP has provided year wise sales projection and estimated number of days it is available (175 days/year) until end of second crediting period which shall be monitored in actual. $U_{p,y}$ (usage rate) conservatively taken as 75% following mandatory requirement of GS 'usage rate guideline' /11/; Baseline fuel consumption equivalent to each type of stove was determined through KPT and fixed ex-ante as provided in table above (section 8.8) and project scenario consumption to be monitored and accordingly fuel saving to be calculated. For ex-ante, latest project scenario consumption as per last monitoring survey has been used. $NCV_{b,fuel}$ is fixed ex-ante a default value of 0.0156 TJ/ton and $EF_{b,f,CO2}$ as 112 tCO₂e/TJ as per applied methodology. $f_{NRB,b,y}$ is taken as default value from TOOL 33 as 30% /27/. $LE_{p,y}$ (Leakage) is to be calculated considering default factor of 0.95 as per applied methodology. Accordingly, cumulative emission reductions over the next 5 years of second crediting period is 110,053 tCO₂e resulting average emission reductions of 22,011 tCO₂e per year.
Findings raised	CAR 1 was raised and closed as discussed in Appendix 2 of this report.
Conclusion	Based on the calculations and results presented in the sections above the implementation of the project activity will result in an average ex-ante estimation of emission reduction conservatively calculated to be 22,011 tCO ₂ e per year. The

	calculation of the emission reductions has been ensured by the validation team based on the VER calculation sheet. The emission reductions estimation can be replicated using the data and parameter values provided in the PDD and supporting file submitted for registration. The data sources mentioned have been verified by the audit team. VVB confirms that the estimates provided in the PDD version 10.1 are reasonable and the project participant has correctly applied the methodology; the calculations are complete and transparent and the data accuracy has been verified.
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8.12 Calculation of Project emissions

Means of validation	The project applies Method 1 and project emissions related to fuel consumption in project scenario is accounted while calculating $SFS_{p,b,y}$ in emission reductions calculation. Hence, it is discussed in section 8.11 above.
Findings raised	N/A
Conclusion	VVB confirms the project emissions are correctly accounted while calculating net emission reductions as per the applied methodology.

8.13 Calculation of Leakage emissions

Means of validation	In order to account leakage emissions, PP has applied default factor of 0.95 in emission reduction calculations provided in section 8.11 above. The approach is as per the applied methodology.
Findings raised	N/A
Conclusion	VVB confirms the Leakage emissions are correctly accounted while calculating net emission reductions as per the applied methodology.

Section 9: Design Changes

No design change has been proposed.

Section 10: Safeguarding Principles

Means of validation	As per GS4GG Safeguarding principles and requirements version 2.0 of 05/12/2024, all projects shall conform to the Gold Standard for the Global Goals Safeguarding Principles & Requirements. The assessment is done as follows: <u>Principle 1- Human Rights</u>: The proposed project activity follows the human rights in accordance with the national legal framework. The project improves the
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livelihood of rural people and reduces the deforestation due to reduced usage of firewood. The project activity will not be put the human rights at risk. Hence, the project respects internationally proclaimed human rights including dignity, cultural property and uniqueness of indigenous people. The project is not complicit in Human Rights abuses. Also, it is noted that India (host country) enacted the Protection of Human Rights Act in 1993, later amended in 2006 as verified from the website of NHRC.

The project activity involves use of improved stoves for heating and cooking purposes and will be used in the households. Hence, the project does not involve and is not complicit in involuntary resettlement as verified during the site visit. The project activity does not involve alteration damage or removal of any critical cultural heritage as confirmed during the site visit. Also, the India (host country) ratified convention regarding the protection of cultural and national heritage in 1977 as verified with the official website of world heritage convention.

Principle 2 – Gender Equality and Women’s Rights:

The project directly benefits to women and women’s rights. The project directly contributes towards the national mission for empowerment of women through improvement of health and attaining vision for empowerment of women under national policy for women 2016 (Women participation will be ensured in the efficient use and spreading the use of solar energy, biogas, smokeless chulas and other technological applications to have positive influence on their life styles and a long term impact on meeting sustainable development goals). In summary, the project takes care of gender equality and women rights.

Principle 3 – Community Health, Safety and Working Conditions:

The project cooking system does not involve any hazardous material during construction and its operation. With the improved HRS system, users have less exposure to harmful smoke. There is no risk of any fire hazard or accident from the project activity. Hence, the project only leads to safe working conditions and improved in health of end users.

Principle 4 – Cultural Heritage, Indigenous Peoples, Displacement and Resettlement:

The project is implemented in existing households. This does not involve any damage to cultural heritage or displacement and resettlement and rights of indigenous people. The project activity takes place in households. Hence, this parameter is safeguarded by the project activity.

Principle 5 – Corruption:

The Project involves installation of Improved stoves for thermal and cooking needs in rural households which does not require any specific permit or approval from any authority. The end users as owner of these system is taking part in the project activity with agreement to project developer to share benefits from the project to be developed as GS project. Once, commissioned the system runs successfully upto its lifetime with proper maintenance. PP has agreed for regular

	operation and maintenance of systems (with two years free maintenance) as confirmed during on-site visit interview with end users. Therefore, the project does not have any scope for corruption or corrupt practice. The principle is safeguarded by the project activity. Principle 6 – Economic Impacts: Labour rights & negative economic consequences: The project is not labour intensive as it doesn't involve major construction works, employing labours is not within the scope of the project. Trained personnel construct project stoves and once commissioned, only periodic maintenance is needed which is done by trained technical personnel. Therefore, there is no forced labour or child labour involved in the project activity. India (host country) has set of rules and acts in place for the protection of labour and employee. Therefore the safeguarding principle under discussion will not have negative impact. Principle 7 – Climate and Energy: The project being implementation in households, reduces fire-wood consumption which leads to overall emission reductions. The energy supply is not hampered compared to baseline. Principle 8 – Water: The project systems does not need water to operate. There is no need to extract ground water or the project has requirement to affect the pre-existing pattern of watercourses. Therefore, the project does not have any negative impact on water. Principle 9 – Environment, ecology and land use: The project involves use of household improved heating & cooking systems which does not involve any landscape modification or leads to vulnerable natural disasters. It also does not involve any manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials. It leads to negligible pollution (air pollution due to firing of firewood) compared to baseline scenario as the project technology reduces firewood consumption compared to baseline scenario. The principle is safeguarded by the project activity.
Findings raised	N/A
Conclusion	VVB confirms that conservative approach has been applied by PP to demonstrate sustainable development of the project activity which is in line with GS4GG requirements.

Section 11: Stakeholder Consultation summary

Means of validation	As verified from registered PDD and validation report, stakeholder consultation was held as per GS principle and requirements and details were provided in the
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	registered PDD. As per GS Principle and requirement and GS stakeholder consultation and engagement requirements, there is no requirement specified for local stakeholder consultation at design renewal. A continuous grievance mechanism as detailed during stakeholder meeting is found in practice. Stakeholders are found aware of continuous grievance mechanism system. Since, a continuous grievance mechanism is in place the feedback round meets the GS4GG requirements.
Findings raised	N/A
Conclusion	CC IPL confirms that the stakeholder consultation process held for the project activity meets the requirement of GS4GG.

Section 12: GS4GG Gender Sensitive Requirements

Means of validation	The project has followed the GS4GG 'gender equality requirements and guidelines' and appropriately justified in section D of the PDD. Below provided VVB's assessment for the same: Step 1 of the requirement:	
	Requirements	VVB's assessment
	Question 1: Does the project reflects the key issues and requirements of Gender Sensitive design and implementation as outlined in the Gender Policy?	Project developer's justification is found appropriate. The project is in line with host country's 'national policy for empowerment of women' along with reliance to non-conventional and clean source of energy. The project directly contributes to upliftment of women health, hygiene and active participation in contributing SDG 15, SDG 7 and SDG 13.
	Question 2: Does the project aligns with existing country policies, strategies and best practices?	
Step 2 of the requirement: Apply gold standard safeguarding principles: The project respects the gold standard safeguarding principles and provides a detailed assessment in Appendix 1 of the PDD. Above in this section, the validation team has provided assessment of each safeguarding principles and the project's impact. VVB confirms none of the principles were adversely impacted by the project.		
Step 3: Conduct stakeholder consultation. The project developer conducted local stakeholder consultation during registration of the project under GS and prepared a detailed report for the same. During renewal of crediting period there is no separate stakeholder consultation is organized, however the project has a system of continuous grievance handling mechanism in place.		

	The project does not seek gender certification at performance level and hence gender responsive guidelines are optional for this project.
Findings raised	N/A
Conclusion	VVB confirms that project correctly complies with 'gender equality requirements and guidelines' of GS.

Section 13: Start date of Crediting Period

Means of validation	As per para 5.1.45 of GS4GG principles and requirement, to maintain Gold Standard Certified Project status beyond five years, a Project must undergo Design Certification Renewal. The second crediting period for the project starts from 05/07/2024 – 04/07/2029, immediately after the end of the first crediting period (05/07/2019 to 04/07/2024). The project life is 20 years and completed only five years by the first set of commissioned stoves. Hence, project systems has life until end date of second crediting period. Therefore, the project is eligible for second crediting period.
Findings raised	N/A
Conclusion	VVB confirms, the second crediting period, as per GS rules, starting from 05/07/2024 to 04/07/2029, correctly and clearly defined with compliance to all the principle and requirements. As per GS deviation (DEV#772), the project has been granted extension until 31/12/2024 to submit documents for design certification renewal without loss of credits /14/. Hence, the project developer is eligible to claim the second crediting period of the project commencing from 05/07/2024.

Section 14: Validation Opinion and Reporting

Swiss Carbon Value Ltd., appointed the VVB, EcoLance Private Ltd., (EPL) to perform the validation (renewal of crediting period) of the GS project (GS10797) 'Himalayan Rocket Stove Project in India' in India.

The validation was performed in accordance with latest GS4GG rule and requirements and relevant UNFCCC criteria for the Clean Development Mechanism, GS Validation and Verification Standard and related Standards/Guidance and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The project will result in reductions of greenhouse gas (GHG) emissions that are real, measurable and give long-term benefits to the mitigation of climate change, as stated in the updated PDD. In the opinion of the validation team, the project meets all relevant GS4GG, UNFCCC, CDM criteria and all relevant host country criteria.

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The review of the updated PDD and the subsequent follow-up interviews have provided validation team with sufficient evidence to determine the validity of the original baseline. The PDD correctly applies the valid version of GS methodology 'Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC)' version 4.0 and meets all relevant criteria therein. The monitoring arrangements described in the monitoring plan are feasible within the project, and it is validation team's opinion that the project implementer is able to implement the monitoring plan and it is deemed likely that the forecasted emission reductions of 22,011 tCO₂e per year from the project during the second crediting period will be achieved, given that the underlying assumptions do not change.

During the course of validation three (03) CARs & seven (07) CLs were identified on initially submitted revised PDD. All the CARs and CL have been resolved by project proponent. One (01) FAR is raised to be verified during first verification by the verifying entity.

In summary, it is validation team's opinion that the project "Himalayan Rocket Stove Project in India" (GS Reference number 10797 meets all relevant GS4GG and UNFCCC requirements for the renewal of the crediting period. Hence EPL requests the renewal of the project activity for the second crediting period from 05/07/2024 to 04/07/2029.

Appendix 1: List of documents reviewed

No.	Author	Title	References to the document	Provider
1	Swiss Carbon Value Ltd.	Updated GS PDD for the project 'Himalayan Rocket Stove Project in India'	Version 7.0 of 07/11/2024, version 8.0 of 27/12/2024, version 9 of 30/12/2024, version 10 of 10/04/2025 Version 10.1 of 13/05/2025	PP
2	Swiss Carbon Value Ltd.	Emission reduction worksheet for the project activity	Version 2.0 of 27/12/2024, version 3 of 30/12/2024, version 4.0 of 10/04/2025	PP
3	Swiss Carbon Value Ltd.	Registered PDD for the project activity 'Himalayan Rocket Stove Project in India' GS 10797	Version 6.0 of 01/02/2023	PP
4	4K Earth Science Pvt. Ltd.	Validation report for the project 'Himalayan Rocket Stove Project in India' GS 10797	Version 5.0 dated 01/02/2023	PP
5	Gold Standard	Methodology: Reduced Emissions from cooking and heating: Technologies and practices to displace decentralized thermal energy consumption (TPDDTEC)	Version 4	Publicly available
6	Gold Standard	Gold Standard for the Global Goals Principles & Requirements	Version 2.0 of 05/12/2024	Publicly available
7	Gold Standard	Gold Standard for the Global Goals CS Activity Requirements	Version 1.2 of October 2019	Publicly available
8	UNFCCC	Guidelines for Sampling and Surveys for CDM Project activities and Programme of Activities	Ver. 4.0 (EB86, Annex 4)	Publicly available
9	UNFCCC	Standard for Sampling and surveys for CDM project activities and programmes of activities	Version 09	Publicly available
10	UNFCCC	Methodological tool 'Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period'	Version 03.0.1- EB 66 Annex 47	Publicly available
11	Gold Standard	Requirement and guidelines: Usage rate monitoring	Version 2 of 27/10/2020	Publicly available
12	Himalayan Rocket Stove Pvt. Ltd.	a) Thermal Efficiency of project stoves b) Technical specifications & Lifetime of project stoves		PP

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13	Himalayan Rocket Stove Pvt. Ltd.	Sales and installation database of HRS project stoves	Until 04/07/2024	PP
14	Gold Standard	Deviation (DEV_772) reference to the project activity GS 10797	Decision date 26/07/2024	Publicly available
15	Himalayan Rocket Stove & Swiss Carbon Value Ltd.	Emission reduction purchase agreement	Dated 26 May 2020	PP
16	Himalayan Rocket Stove Pvt. Ltd.	Sales Invoice and warranty card for project stoves		PP
17	Council on Energy, Environment and Water	State of clean cooking energy access in India	September 2021	Publicly available
18	Ministry of Petroleum and Natural Gas	Pradhan Mantri Ujjwala Yojana	1st May 2016	Publicly available
19	Himalayan Rocket Stove Pvt. Ltd.	Baseline Survey	Between January-March 2024	PP
20	UNFCCC	Tool 30: Calculation of the fraction of non-renewable biomass	Version 04.0	Publicly available
21	Himalayan Rocket Stove Pvt. Ltd.	Baseline Performance test	March 2023	PP
22	Swiss Carbon Value Ltd.	Calculation worksheet for fNRB		PP
23	Swiss Carbon Value Ltd.	SDG tool_GS 6301	--	PP
24	Govt. of India	National web portal	https://www.india.gov.in/india-glance/profile	Publicly available
25	Ministry of Environment, Forest & Climate Change, Govt. of India	Assessment of Dependence of Inhabitants of Forest Fringe Villages (FFVs) on Forests for Fuelwood, Fodder, Small Timber & Bamboo: Quantified Estimation of Removals	Year 2020	Publicly available
26	Ministry of Environment, Forest & Climate Change, Govt. of India	India State of Forest Report 2023	Year 2023	Publicly available

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27	UNFCCC	Tool 33: Default values for common parameters	Version 02.0	Publicly available
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Appendix 2: List of Findings raised (CAR, CL, FAR)

Table 1. Remaining FAR from Previous verification and/or validation

FAR ID	00	Section no.		Date: DD/MM/YYYY
Description of FAR				
Not Applicable				
Project participant response				Date: DD/MM/YYYY
Documentation provided by project participant				
VVB's assessment				Date: DD/MM/YYYY

Table 2. CL from this verification

CL ID	01	Section no.		Date: 11/12/2024
Description of CL				
PP is requested to provide following documents:				
1. Carbon waiver from project beneficiaries (for 10 samples) showing the ownership of claimed carbon credits. 2. Declaration from all the other parties (e.g stove manufacturer, local implementing partner etc.) involved in the project activity waiving their rights to claim carbon credits to the PP. 3. Baseline survey data. 4. Efficiency test reports for the project stoves. 5. Lifetime test reports for the stoves. 6. Grievance redressal policy and records. 7. Organisation employee policy / HR policy. 8. LSC records. 9. The complete user database				
Project participant response (1st round)				Date: 23/12/2024

1. Sample carbon credit ownership documents have been shared along with the responses.
2. The HRS (Himalayan Rocket stoves Pvt Ltd) is the technology manufacturer, thus own the devices . The carbon waiver from end users & the local implementing partner has been secured to transfer the credit ownership to HRS. Same has been provided in response to the above clarification request. MOM has been signed with local Implementing partner to confirm that “Carbon Rights lie with HRS solely”. Also, each invoice has the same clause mentioning the sole right of carbon credit ownership lie with HRS only to avoid any gaps.
3. Baseline survey data has been shared with the responses.
4. Efficiency test certificate for the project stoves has been shared along with the responses.
5. Lifetime test certificate for the stoves has been shared with the responses.
6. Grievance redressal policy and records are maintained and shared along with the responses.
7. Organisation employee policy / HR policy is maintained and shared along with the responses.
8. LSC records held as per the GS requirement during the CP1, the continuous grievance mechanism, public awareness & feedback interaction documents has been shared along with the responses.
9. The complete user database has been shared under the head of sales data sheet.

Documentation provided by project participant

1. Credit ownership document.
2. Baseline survey data.
3. Efficiency test reports for the project stoves.
4. Lifetime test reports for the stoves.
5. Grievance redressal policy and records.
6. Organisation employee policy / HR policy.
7. LSC records.
8. The complete user database

VVB's assessment (1st round)

Date: 20/12/2024

The audit team checked the submitted records and cross checked the same with site visit observations and confirm the details are consistent. The project is implemented as per registered project design and records are maintained. For each project stove traceability exist in terms of sales record, owner, carbon rights transfer, after sales service etc. A effective grievance handling mechanism is place as detailed in the PDD. Hence, the audit team closed the CL.

CL ID	02	Section no.	A.6	Date: 11/12/2024
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Description of CL

In section A.6 of the design certified PDD minimum lifespan of the stove “Eco mini” was mentioned as 8-10 years. But in the revised PDD, lifespan of Eco mini has been mentioned as 20 years. PD is requested to state the reason for the increased lifetime of the specified model of the project stove.

Project participant response (1st round)

Date: 23/12/2024

Section A.3 has been updated to remove the typo error. The HRS stoves are made up of Stainless-Steel material sheets, lifespan of stoves is 20 years as per the manufacturer specification. Lifespan certificate from the manufacturer has been provided along with the response.

Documentation provided by project participant

1. Manufacturer certificate on the life span.

VVB's assessment (1st round)

Date: 20/12/2024

The audit team noted a typical error in registered PDD for life of one of the stove type. As per manufacturer certificate all models has a life more than 20 years. Hence, accepted in the updated PDD and CL is closed.

CL ID	03	Section no.	B.3	Date: 11/12/2024
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Description of CL	
In section B.3 of the revised PDD, emissions of CH ₄ and N ₂ O are not included in the project boundary. Whereas both the baseline and project scenario involve burning wood for thermal energy requirements of households, as per IPCC guideline there are CH ₄ and N ₂ O emissions for such cases. Therefore, PD is requested to clarify the reason for not considering CH ₄ and N ₂ O under the project boundary.	
Project participant response (1st round)	Date: 23/12/2024
Please be clarified that the project activity involves the distribution of efficient technology which address the vital need of space heating primarily with additional provision for cooking simultaneously thus replacing the traditional Bukhari Stoves used in the Himalayan Mountain region majorly or in similar colder region within the host country. This technology ensures the complete combustion of wood thus results in huge saving of fuel wood consumption in comparison to Bukhari stoves. There are no direct significant emissions of CH ₄ & N ₂ O linked with the project heating stoves or baseline heating stove operations therefore following gases have been ignored for the simplicity due to the insignificant impact within the project boundary in the baseline as well as in project scenario. This is in line with the methodology TPDDTEC version 4, para 3.2.1 a, b, c. Therefore, it is stated as insignificant source of emissions under section B.3 in the updated PDD version 8.	
Documentation provided by project participant	
1. Revised RCP PDD version 8	
VVB's assessment (1st round)	Date: 20/12/2024
The claim of non-CO ₂ emissions are conservative and justification by PP is also found appropriate. The registered PDD is also found consistent with the claims. Hence, response is accepted and CL is closed.	

CL ID	04	Section no.	B.4	Date: 11/12/2024
Description of CL				
In section B.4 of the PDD, it has been shown that baseline wood consumption of households with different project ICS model are different. Also baseline fuel consumption is not fixed ex-ante and it will be determined through baseline KPT during monitoring. PD is requested to include information on based on what criteria respective baseline households will be chosen for different models of project ICS.				
Project participant response (1st round)				Date: 23/12/2024
As explained in above response the project technology is not an ordinary ICS rather it is an innovative heating stove design which ensures complete combustion for efficient thermal space heating with additional cooking provision, to maximize the utilization of thermal energy and drastically reduces the fuel wood consumption in comparison to the baseline Bukhari stoves to cater the essential need of Himalayan Mountain region during the peak winter seasons.				
The key criteria to compare the baseline Bukhari stove fuel consumption with the project heating stove models is based on the space heating area mainly i.e. the room size where the stove is operational.				
RCP PDD section B.4 has been updated to mention the key criteria used to select the baseline household and determine the baseline fuel wood consumption for different models of project.				
Documentation provided by project participant				
1. RCP PDD version 8				

VVB's assessment (1st round)	Date: 20/12/2024
PP's explanation and procedure is found consistent with registered PDD. Depending on the size of room users procure a specific model for effective use and accordingly it varies the fuelwood consumption. The baseline survey and KPT records the existing baseline system and size of rooms with family size which provides comparable result for equivalent HRS model to be used. Accordingly, PP refers the baseline fuelwood consumption. Also, in the final PDD, PP has taken baseline fuelwood consumption value as fixed ex-ante parameter for the entire crediting period. Hence, response is accepted and CL is closed.	

CL ID	05	Section no.	B.6.1	Date: 11/12/2024
Description of CL				
In the table under section B.6.1 of the PDD, parameter for SDG 7 is mentioned as "Number of Himalayan Rocket Stoves installed under the project activity". PD is requested to be clearer on whether or not operationality status of the installed stoves will affect their determination of contribution towards SDG 7 ?				
Project participant response (1st round)				Date: 23/12/2024
As per the robust monitoring plan described under section B.7.3 periodic surveys are conducted to ensure the 100% usability of the HRS stove during the peak winter season (October to March). The installed stoves mentioned under section B.6.1 includes all the operational stoves. However, being conservative, usage rate consideration for the calculation of the emission reduction is based on the application of GS usage rate guideline-mandatory requirement.				
Documentation provided by project participant				
1. RCP PDD version 8				
VVB's assessment (1st round)				Date: 20/12/2024
The explanation and updates with respect to SDG 7 in updated PDD is accepted and hence CL is closed.				

CL ID	06	Section no.		Date: 11/12/2024
Description of CL				
In the fNRB calculation, - For many parameters data of the state Madhya Pradesh from the Indian State of Forest Report 2019 has been used whereas the project mainly focuses on the Himalayan region of India which does not include the state Madhya Pradesh. PD is requested to clarify reason for the same. - It has been also observed that for some parameters data from Indian State of Forest Report 2019 has been used whereas for some other parameters data from Indian State of Forest Report 2021 has been used. PD is requested to clarify the reason for using data from two different years for different years and not using all the data from the most recent available report. - For the parameter $MAI_{other,i}$ data from 2006 IPCC guidelines has been used. PD needs to clarify the reason for not using the latest updated values for the same. - For the parameter $MAI_{forest,i}$ data from the year 2011 has been used, PD is requested to clarify why more recent data has not been used ?				
Project participant response (1st round)				Date: 23/12/2024

FNRB Calculation has been updated with regard to the Tool 30 (Version 04) & the most recent ISFR dataset as required for the respective parameter specified in the TOOL 30.

Revisions in response to the above queries are as follows:

- Please refer the revised FNRB calculation sheet version 2, which has been updated with respect to the latest ISFR (India State of Forest Report 2023) data publicly available with respect to the Himalayan Region (states as per the Project technology stove deployment database).
- PO would like to clarify that the most recent publicly available data has been used (such as ISFR 2023). But few parameters are derived from the most recent available government data & IPCC data due to the unavailability of the same information in the ISFR 2023 report.
- FNRB Calculation has been revised to use the latest IPCC values.
- FNRB Calculation has been revised to use the latest IPCC values

Documentation provided by project participant

1. ISFR 2023 based updated FNRB calculation sheet

VVB's assessment (1st round)

Date: 20/12/2024

fNRB is revised and calculated for entire host country (India) following latest version of TOOL 30. The sources used are latest and input values are correctly taken. Since, the project is targeted for the entire country, a country specific fNRB is appropriate. The audit team checked and verified the calculation and input values in the worksheet and confirm the calculation to be correct. Hence, CL is closed.

CL ID

07

Section no.

Date: 11/12/2024

Description of CL

It has been observed during the on-site visit that both the baseline and project stoves considered under the project activity is mainly used for space heating and water boiling. Cooking is done on these stoves on very rare occasions. In the monitoring plan PD has mentioned that some parameters required for the ER calculations will be measured through Kitchen Performance Test (KPT). So, since KPT is designed mainly to capture the kitchen performance/cooking habits of a household, PD is requested to explain how monitoring through KPT will be appropriate in the specific scenario of this project.

Project participant response (1st round)

Date: 23/12/2024

Please be clarified that the methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC) version 4 is applicable to project activities that introduce technologies and/or practices that reduce or displace greenhouse gas (GHG) emissions from the thermal energy consumption of households and/or residential, institutional, industrial, or commercial facilities which is the project case. In line with the methodology "Table 1" project technology meets the applicable technologies and practices by catering the dual need of space heating with the additional water boiling & cooking practices.

In line with the methodology section 4.1.11 to 4.1.14, the project performance field tests (PFT) for the applicable method 1 is opted in line with the guidance provided under Annex 2. Thus, KPT is a performance-based field tests which is not only limited to cookstove technology rather it is a field test which can be adopted to measure the fuel wood consumption for the applicable technologies within the methodology. Methodology Annex 2 addresses the same by explicitly mentioning that, "The principles of the KPT also apply to performance testing of other decentralized energy-saving devices. This annex and associated KPT protocol may be used as a preliminary guide to field performance tests (FTs) for the other technologies.". Thus, the Annex 2 guidance is adopted for the project activity.

Documentation provided by project participant

1. RCP PDD Version 8

VVB's assessment (1st round)	Date: 20/12/2024
The explanation for KPT is found appropriate and in line with methodology requirements. The project is already registered and the monitoring procedures are in line with the applied methodology. Hence, response is accepted and CL is closed.	

Table 3. CAR from this verification

CAR ID	01	Section no.	B.6.3	Date: 11/12/2024
Description of CAR				
In section B.6.3 of the PDD, - Baseline and project scenario is not shown for all the SDGs included in the project activity. - Only values for baseline and project scenario have been listed but sample calculations showing equations used as instructed in the GS PDD template guide – v1.5 has not been shown. PD is requested to review and do the necessary changes.				
Project participant response (1st round)				Date: 23/12/2024
RCP PDD Section B.6.3 is updated to showcase the Baseline and project scenario with respect to all the 3 SDGs contributed: Project contributed to 3 SDGs: 13 Climate Action 7 Affordable and clean Energy 15 Life on Land Detailed calculation described under section B.6.				
Documentation provided by project participant				
1. RCP PDD Version 8				
VVB's assessment (1st round)				Date: 20/12/2024
Section B.6.3 of the PDD is corrected and SDG outcomes are shown transparently for all identified SDGs. The ER sheet is also presented accordingly. Hence, CAR is closed.				

CAR ID	02	Section no.	B.6.4	Date: 11/12/2024
Description of CAR				
In section B.6.4 of the PDD, - No SDG has been mentioned. - It is not clear what are the numbers mentioned in the table, they don't have any referred parameters or units. PD is requested to review and correct the section as per GS PDD template guide – v1.5.				
Project participant response (1st round)				Date: 23/12/2024
PDD Section B.6.4 has been updated to report the following: - Project contributes to SDGs 7 ,13 & 15, and the same has been reported in the revised PDD appropriately. - SDG units are appropriately mentioned now in the revised PDD. - PDD has been update in line with the template requirement.				
Documentation provided by project participant				
1. RCP PDD Version 8				
VVB's assessment (1st round)				Date: 20/12/2024
Section B.6.4 of the PDD is corrected and SDG outcomes are shown transparently for all identified SDGs. The ER sheet is also presented accordingly. Hence, CAR is closed.				

CAR ID	03	Section no.	B.7.3	Date: 11/12/2024
Description of CAR				
In section B.7.3 of the PDD, information on the following are required as per GS PDD template guide – v1.5 - Operational and management structure for monitoring; - Provisions for data archiving, and responsibilities and institutional arrangements for data collection and archiving. these are not included. PD is requested to include the necessary information as per the GS PDD template guide.				
Project participant response (1st round)				Date: 23/12/2024
Section B.7.3 has been updated as per the requirements of the GS PDD template guide to report the following information appropriately: - Operational and management structure for monitoring has been reported. - Provisions for data archiving, and responsibilities and institutional arrangements for data collection and archiving The monitoring plan in place currently follows a structured, bottom-up approach to data collection, processing, and reporting. This approach begins at the grassroots level, where survey data is collected by on-ground teams using a manual questionnaire. These surveys are designed to capture detailed information regarding household requirements and service usage. After the surveys are completed, the data is manually entered into a digital format by the same team. This digitized data is then submitted to a central monitoring team for further processing and tracking. The central team regularly monitors this data, periodically checking for new users, tracking the addition of new households to the system, and ensuring that the precise data is maintained appropriately. Once submitted, the central monitoring team maintains the final datasets, ensuring that they are up-to-date and accurate. This involves updating the database regularly to incorporate any new information and flagging any discrepancies in the data. Additionally, the review and reporting team analyzes this dataset, examining homestay & household needs and service requirements. They then generate reports based on these insights, which are used to inform decision-making, improve service delivery, and identify areas for intervention.				
Documentation provided by project participant				
1. RCP PDD Version 8				
VVB's assessment (1st round)				Date: 20/12/2024
The corrections are found appropriately done in the updated PDD. All monitoring parameters, operational and management structure and transparent monitoring plan is provided in the updated PDD. The details are found consistent with the requirements of the applied methodology and guidance. Hence, response is accepted and CAR is closed.				

Table 4. Forward Action Request

FAR ID	01	Section no.		Date: 28/12/2024
Description of FAR				
The ongoing Financial need shall be assessed as per section 4.1.52 (c) of GS principle and requirements by the verifying VVB.				
Project participant response				Date:

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Documentation provided by project participant	
VVB's assessment	Date:

Appendix 3: Competency of Audit and TR team



Certificate of Appointment

<< CHAMPOK BURAGOHAIN >>

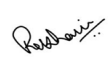
The qualification and appointment are done following the requirements of
ECOLANCE PRIVATE LIMITED (EPL/PR/5)

Standard/ Scheme			
☒ VCS	☒ CCBS	☒ GS4GG	☒ GCC
☐ SD Vista	☒ Social Carbon	☐ Plan Vivo	☐ Plastic Standard
☐ CerCarbono	☒ ISO 14064-1: 2018		

Role			
☒ Auditor	☒ Team Leader	☒ Reviewer	☒ Technical Expert
☐ Financial Expert	☐ Trainee	☐ Local Expert	☒ GHG Verifier [Applicable to 14064-1: 2018]

Sectoral Scopes	
☒ Energy Industries (Renewable/Non-Renewable)	
☒ Energy Demand	
☒ Waste Handling and Disposal	
☐ Forestry and Other Land Use	
☐ Agriculture	
☐ Livestock and Manure	
☒ General [Applicable to 14064-1: 2018]	

Certificate No	EPL/CER/CH/4
Date	15/02/2024
Validity	14/02/2025

Authorized by	Rekha Menon
Designation	Director
	

EPL/FR/5

ECOLANCE PRIVATE LIMITED

Version 2

12-02-2024

ECOLANCE PRIVATE LIMITED



Certificate of Appointment

<< SAMAR DAS >>

The qualification and appointment are done following the requirements of
ECOLANCE PRIVATE LIMITED (EPL/PR/5)

Standard/ Scheme			
☒ VCS	☐ CCBS	☒ GS4GG	☒ GCC
☐ SD Vista	☐ Social Carbon	☐ Plan Vivo	☐ Plastic Standard
☐ CerCarbono	☒ ISO 14064-1: 2018		

Role			
☐ Auditor	☐ Team Leader	☐ Reviewer	☒ Technical Expert
☐ Financial Expert	☒ Trainee	☐ Local Expert	☐ GHG Verifier [Applicable to 14064-1: 2018]

Sectoral Scopes	
☒ Energy Industries (Renewable/Non-Renewable)	
☒ Energy Demand	
☒ Waste Handling and Disposal	
☐ Forestry and Other Land Use	
☐ Agriculture	
☐ Livestock and Manure	
☒ General [Applicable to 14064-1: 2018]	

Certificate No	EPL/CER/SD/2
Date	01/11/2024
Validity	31/10/2025

Authorized by	Rekha Menon
Designation	Director
	

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Certificate of Appointment

<< PREM KUMAR POKHREL >>

The qualification and appointment are done following the requirements of
ECOLANCE PRIVATE LIMITED (EPL/PR/5)

Standard/ Scheme			
☒ VCS	☐ CCBS	☒ GS4GG	☒ GCC
☐ SD Vista	☒ Social Carbon	☐ Plan Vivo	☐ Plastic Standard
☐ CerCarbono	☐ ISO 14064-1: 2018		

Role			
☒ Auditor	☒ Team Leader	☐ Reviewer	☒ Technical Expert
☐ Financial Expert	☐ Trainee	☒ Local Expert -Nepal	☒ GHG Verifier [Applicable to 14064-1: 2018]

Sectoral Scopes	
☒ Energy Industries (Renewable/Non-Renewable)	
☒ Energy Demand	
☒ Waste Handling and Disposal	
☐ Forestry and Other Land Use	
☐ Agriculture	
☐ Livestock and Manure	
☐ General [Applicable to 14064-1: 2018]	

Certificate No	EPL/CER/PP/3
Date	15/02/2024
Validity	14/02/2025

Authorized by	Rekha Menon
Designation	Director
	

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