Sustainable Development Verified Impact Standard

UPENERGY-SOCIAL AND CLIMATE IMPACT PROGRAMME- NIGERIA-1 VALIDATION REPORT

Earthood

Document Prepared by Earthood Services Private Limited

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Client	UpEnergy Group
Project Title	UpEnergy- Social and Climate Impact Programme-Nigeria-1
Project Location	Nigeria

Summary:

Earthood Services Private Limited (hereafter referred to as ESPL) has been contracted by UpEnergy Group to conduct the validation of the grouped project – "UpEnergy- Social and Climate Impact Programme-Nigeria-1" (VCS ID 2673) regarding the relevant requirements of SD VISta Program Guide and Standard (SD VISta Standard Version 1.0/01/ & SD VISta Program Guide Version 1.0/02/).

The proposed grouped project contributes to the achievements of SDG target 1, 5, 7, 8, 12, 13 and 15. The project entails distribution and installation of fuel efficient improved cookstoves (ICS) for cooking purposes in the households of the host country, Nigeria, thereby reducing the consumption of non-renewable biomass (like charcoal and fuelwood) used in inefficient traditional stoves. The project is a voluntary initiative as the host country's laws do not mandate the distribution of improved cookstoves (ICS) to the local communities.

The objective of validation is to perform a complete and independent review of the proposed project activity against the applicable SD VISta requirements, including the SDGs claimed in the project, people and planet benefits impacted by the project and compliance with the relevant SD VISta and host party criteria. These are assessed to ensure that the project design, as documented, is sound and reasonable, and that it fits the established standards. Validation is a prerequisite for all SD VISta projects, and it is viewed as vital to give stakeholders assurance about the project's quality and expected emission reductions. The VVB's aim is to perform a complete, independent evaluation of the project activity's validation.

The scope of validation can be described as an objective and independent review of the SD VISta Project Description (PD)/05/. The SD VISta PD is compared to the relevant criteria and guidance documents provided by SD VISta, including the SD VISta Program Guide (v1.0, dated 22 January 2019)/02/, SD VISta Standard (v1.0, dated 22 January 2019)/01/ and Program Definitions (v1.0, dated 22 January 2019)/2.2/ to ensure that the project meets the applicability conditions as per these documents.

The validation process is divided into 4 stages:

Desk review of the project description documents.

A review of data and information

Cross-checks between information provided in the SD VISta PD/04/05/ and information from sources using all available resources without regard to the project proponent's information.

Follow-up actions, including:

Physical interviews/7/11/ with relevant stakeholders in the host country during the VVB on-site visit with individuals having expertise of project development.

Cross-checking the information provided by interviewed people with the information provided by the project proponent using all available means.

Reference to publicly available information about projects or technologies that are similar to the grouped project under validation and review, depending on the approved methodology being used to ensure that formulae are acceptable, and calculations are accurate.

The final validation report and opinion, as well as the resolution of lingering difficulties.

A risk-based approach has been followed to perform this validation. During the validation process, a total of 10 findings were raised, which includes 01 corrective Action quests (CARs), 09 Clarification Requests (CLs) and 0 Forward Action Requests (FARs). All of these were successfully closed.

It is found that the SD VISta PD/05/, and accompanying documents provided are all in compliance with SD VISta criteria. The validation was completed with a reasonable level of assurance and no uncertainties were found related to the project activity validation.

Earthood Services Private Limited (hereafter referred to as ESPL) certifies that the grouped project “UpEnergy- Social and Climate Impact Programme-Nigeria-1” meets the requirements of the SD VISta Project Description template, v1.0/4/, the SD VISta Program Guide and Standard (SD VISta Standard Version 1.0/01/ & SD VISta Program Guide Version 1.0/02/). The grouped project will contribute to a total of 7 SDGs which are SDG target 1, 5, 7, 8, 12, 13 and 15. ESPL issues a positive validation opinion, certifying that the project meets the applicable SD VISta standards and thereby proposing that it be registered.

CONTENTS

1 VALIDATION PROCESS

1.1 Objective

UpEnergy Group (PP) has contracted Earthood Services Private Limited (VVB) to carry out the validation of the grouped project activity "UpEnergy - Social and Climate Impact Programme-Nigeria-1" (VCS ID:2673) located in Nigeria with respect to the relevant requirements of SD VISta Program Guide (v1.0, dated 22 January 2019)/02/, SD VISta Standard (v1.0, dated 22 January 2019)/01/ and Program Definitions (v1.0, dated 22 January 2019)/2.2/.

The purpose of this validation is to have an independent third-party assessment of proposed project activity to determine its compliance with the qualification criteria set out in the SD VISta Standard and Program Guide to attain real, measurable, additional, and permanent SD VISta claims. The validation statement opinion is a written assurance that:

- The project complies with all the applicable SD VISta requirements and can claim for SDGs over the project's crediting period.
- The validation followed the requirements of the current version of the SD VISta Program Guide (v1.0, dated 22 January 2019)/02/ and SD VISta Standard (v1.0, dated 22 January 2019)/01/ to ensure the quality and consistency of the validation work and the report.
- The project shall result in addressing SDG target 1, 5, 7, 8, 12, 13 and 15 by distributing 500,000 (ICS) and emission reductions as declared by the organisation or GHG project's GHG assertion.
- The data reported is accurate, complete, consistent, transparent, and free of material error or omission.

1.2 Scope and Criteria

The scope of the validation is the review of the sustainable development impacts generated by the project, their contribution to the UN Sustainable Development Goals (SDG) and the benefits for people and prosperity and the benefits for the planet that they imply. With this aim, the audit assessed the project design, its management, the conditions of the stakeholders and the natural and ecosystem services at the project start, as well as the plans design for the monitoring of the project's impacts. The SD Vista PD is reviewed against the relevant criteria and decisions by the SD VISta Program. ESPL has employed a risk-based approach in the validation, focusing on the identification of significant risks and reliability of project monitoring and generation of emission reductions.

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

The validation is carried out based on of the following requirements, applicable for this SD VISta grouped project:

- SD VISta Program Guide (v1.0, dated 22/01/2019) /2.1/
- SD VISta Standard (v1.0, dated 22/01/2019) /01/
- SD VISta Program Definitions (v1.0, dated 22/01/2019) /2.2/
- Other relevant rules, including that grouped project activity is in accordance with rules and legislation of the host country (Nigeria).

The validation process is divided into four stages:

I. Desk review of SD VISta Project Description (PD):

- Evaluation of data and information
- Cross-checks between information provided in the SD VISta PD/05/ and information obtained from other sources using all available resources without regard to the project proponent's information.

II. On-site visit and follow-up interviews with project stakeholders:

- On-site interviews with relevant stakeholders in the host country with expertise in project development. /7/11/
- Cross-checking the information provided by interviewed people with the information provided by the project proponent using all available means.

III. Reference to publicly available information about projects or technologies that are similar to the grouped project under validation and review.

IV. The final validation report and opinion, as well as the resolution of outstanding issues.

1.3 Level of Assurance

☒ Reasonable Level of Assurance

☐ Limited Level of Assurance

The threshold for quantitative materiality with respect to the aggregate of errors, omissions and misrepresentations, individually or in the aggregate, for the reported SD VISta claim was limited to five percent, as required by section 5.2.3 of the SD VISta Standard /01/.

The approach used by ESPL for validation of the crediting period is built on a thorough understanding of the risks associated with reporting data on addressing SDG targets. ESPL conducted the validation by reviewing substantiating evidence and other relevant information and explanations from sources to provide reasonable assurance that targeted SDGs are fairly reported.

In the draft validation report (prepared by assessment team), the information provided is reviewed by an independent technical review team (one or more members) to confirm if the internal procedures established and implemented by ESPL were duly complied with and such

opinion/conclusion is reached in an objective manner that complies with the applicable SD VISta requirements as appropriate. The technical review team is collectively required to possess technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of the technical review team are independent of the validation team. The report approved by the Technical Manager is endorsed by the Managing Director, who is overall responsible for ensuring quality, before final release. Further details of applicable procedures and responsibilities concerning the ESPL Quality Management System (QMS) are available on its website (www.earthood.in).

1.4 Summary Description of the Project

Summary description of grouped project activity has been illustrated in section 2.1.1 of SD VISta PDD appropriately. As per the given details in PDD, information was assessed on-site and found to be consistent. The project activity "UpEnergy - Social and Climate Impact Programme- Nigeria-1" undertakes dissemination of fuel efficient improved cookstoves (ICS) to households in Nigeria at a subsidized price. The grouped project activity is a voluntary initiative as host country laws do not mandate the distribution of ICS to the households. This ICS technology is designed to reduce GHG emission by improving the thermal efficiency of the cookstove thereby reducing the fuel consumed by households for domestic purposes and alongside promoting public health to tackle several health challenges such as indoor air pollution caused due to using less efficient stoves.

The baseline and project scenarios are well described and consistent with the data that was verified during the VVB onsite audit. The average annual and total GHG emission reduction from the group project activity is expected to be 1,633,731 and 11,436,117 tCO_2e, respectively, over the first 7-year renewable crediting period.

Along with reducing emissions the project also aims at a holistic development of the community and planet. It does so by contributing to UN SDG Goals 1,5, 7, 8, 12, 13, and 15 which include in their purview increased savings, job creation, women empowerment, access to clean energy, reduced consumption of non-renewable biomass (charcoal) and decreased rates of deforestation in Nigeria.

The project caters to the following SD VISta sectoral scopes:

Sectoral Scope 1 – Agriculture Forestry and Other Land Use

Sectoral Scope 2 - Climate Change Adaptation

Sectoral Scope 4 – Energy

Sectoral Scope 10 – Livelihoods

Sectoral Scope 14 – Women's Empowerment

1.5 Audit Team Composition

The Audit Team has been designed with much care to fulfil the set competency criteria. The team collectively has knowledge of the rules and requirements of the registry (VCS), sectoral

scopes relevant to the project (03- Energy Demand), domain knowledge (SDGs etc.) and of the social and cultural expertise require for the project location (Nigeria).

ESPL confirms that the audit team has no conflict of interest and furthermore is fully independent from all other aspects of the project.

The Validation team consists of the following personnel:

ROLE	LAST NAME	FIRST NAME	COUNTRY
Team Leader	Chaudhary	Anjali	India
Trainee Validator	Sengupta	Akanksha	India
T.A Expert (3.1) (New)	Chaudhary	Anjali	India
T.A Expert (3.1) (Old)	Guleria	Shifali	India
Local Expert	Luka	Kumden Nanbal	Nigeria
Technical Reviewer T.A Expert to T.A(3.1)	Mahala	Deepika	India
Financial Expert	Singh	Kaviraj	India

The UN SDG Experts involved in the project are listed below.

ROLE	LAST NAME	FIRST NAME	UN SDG
External Expert SD VISta Scope 1- AFOLU	Srivastava	Parul	UN SDG 12 UN SDG 15
External Expert SD VISta Scope 2- Climate Change Adaptation	Phukhan	Sukanya	UN SDG 13
External Expert SD VISta Scope 4- Energy	Singh	Ranjan	UN SDG 7
External Expert SD VISta Scope 10- Livelihoods	Kaushik	Sumit	UN SDG 1 UN SDG 8
External Expert SD VISta Scope 14- Women Empowerment	Mahala	Deepika	UN SDG 5

The Competency Statement of each team member, explicated, can be found in Appendix I.

1.6 Method and Criteria

Earthood Services Private Limited has been contracted by the Up Energy Group to conduct the validation of the project activity, with regards to the relevant requirements of SD VISta Standard, Version 1/01/. The project activity uses the VMR0006 version 1.1/08/, which is classified as sectoral scope 3 Energy Demand ". The following were included in the validation:

- Contract with PP for the scope and appointment of validation team and technical review team.

- Completeness check of VCS PD.

- Project Description desk review and estimated GHG emission reduction calculation sheet.

- Remote inspection by validation team.

- Interview with project representatives and project owner.

- Reporting and closure of findings (CARs/CLs/FARs) and preparation of draft validation report.

- Independent technical review of the draft validation report and final/revised documentation (e.g., VCS PD, corresponding estimated ER calculations sheet and evidence).

- Issuance of the final validation report to the contracted PP.

- **Sampling plan for validation of the project:**

The Sampling and surveys for CDM project activities and programmes of activities (Version 9.0)/12/ states under paragraph 28 that "When the project participants or the coordinating/managing entity have applied a sampling approach, the VVB may apply acceptance sampling as described in the steps indicated in paragraphs 29–38 as part of validation/verification activities".

Since the PP has determined the value of ex-ante parameter B_{old}, efficiency of baseline stove and type of fuel consumed through sampling of 165 baseline households, the validation team conducted acceptance sampling in line with paragraph 30 and 31 of the sampling standard version 9.0/12/.

The validation team randomly selected samples from PP's baseline survey records to check the acceptability (or otherwise) of the data for each such record with PP's sample records and determined if the PP's sample records meet the requirements.

Sample Size:

AQL	UQL	Producer Risk	Consumer Risk	Sample Size; Min	Acceptance No.
0.5%	20%	10%	10%	11	0

The Validation team covered a total of 11 samples to confirm baseline scenario and verify the baseline KPT results. All the households interviewed were found to have locally made unimproved metal tripod charcoal stoves and confirmed that KPTs were conducted at their household. Therefore, no discrepancies were observed.

1.7 Document Review

According to the SD VISta standard requirements/01/, the SD VISta project description/05/, and supporting documents related to the project design and baseline were reviewed. The desk review included:

- Evaluation of the data and information given to ensure that it is complete and consistent with the SD VISta standards/01/.
- A review of the project description/05/, with special emphasis to the U.N. Sustainable Development Goals.
- Review of the monitoring plan, stakeholder identification and engagement in the project.

In addition, the validation team employed third-party material such as host-party legislation, technical reports pertaining to the project design or basic conditions, and technical data available in the public domain. The validation team cross checked the information, statements and claims in the PD through various evidence provided by PP or from other sources. A complete list of documents/ evidence reviewed is included as Appendix III.

Earthood conducted a desk review as under.

a. A review of the data and information presented to verify their completeness.
b. A review of the monitoring plan, the monitoring methodology including applicable tool(s) and, where applicable, the applied standardized baseline, paying particular attention to the frequency of measurements, the quality of project technology including efficiency of the project stove, and the quality assurance and quality control procedures
c. An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions

1.8 Interviews

In accordance with SD VISta Program Guide (v1.0, dated 22 January 2019)/02/, para 3.5.6 “Assessments shall include a visit to the project site. The purpose of the site visit is to confirm the validity of the project description or monitoring report and to ensure that a project meets the rules and criteria of the SD VISta Program.”, the VVB conducted an onsite audit from 20/05/2023 to 22/05/2023. The validation team conducted physical interviews with the end users, PP representatives and implementation partners as a part of validating the project description and verify the information included in the project documentation and to gain additional information regarding the compliance of the project with the SD VISta requirements. The following points were discussed as the part of the interviews:

Introduction, scope and objective of work, roles and responsibilities of audit team, resources required, and timetable of the onsite audit including venue for closing meeting and any concerns from PP.

All the details about the project activity mentioned in the SD VISta PD were cross-checked by discussion with the PP representatives.

Compliance of monitoring procedures for the monitoring of SDG targets, benefits for people and prosperity.

Conducting physical interviews with the project beneficiaries.

Submission of the audit findings to the client and agreement on the issues raised and agreement on timeline.

The site audit and interviews by the assessment team were conducted from 20/05/2023 to 22/05/2023.

The list of PP representatives interviewed by the VVB team is as follows:

S.No	Name	Role	Affiliation	Date	Subject	Assessment team members
	Murugesh Sudalairaja	Project Officer - Carbon Technical	UpEnergy Group (India)	20/05/2023	- Project design -Project Implementation status -Project start date and Project Location -Choice of applied methodology -Baseline Identification and Additionality of project -Investment analysis -Grouped project eligibility criteria -Monitoring and reporting procedure -Quality Assurance -Management and operating systems -local stakeholder consultation process	Anjali Chaudhary, Shifali Guleria and Kumden Nanbal Luka
	Kumarswamy CK	Senior Program Officer – Carbon				
	Toyin Oshaniwa	Regional Carbon Operations Manager	UpEnergy Group (Nigeria)			
	Tosin Olorunmaiye	Carbon Officer				
	Matilda Owohtu	Nigeria Operation Manager	Climate Catalyst Ltd			
	Shehu Abdul-Hafiz	Finance Manager				
	Ngozika Vivien Ikenna	Accountant				
	Ahmed Yero	Data Officer				
	Benevolence Buoye	Data Associate				
.	Chidiadi Arigbonu	Data Associate				
.	Muhammed T. Abdulwahab	Warehouse Manager				
.	Bimbola Agboola	Community Engagement Officer				

					-Compliance with relevant laws	

The list of LSC participants remotely interviewed over telephonic calls by the VVB are as follows:

Name	Affiliation	Date	Subject	Assessment team members
Elder Zaccheaus Kadiri	Stakeholder (Community Leader-Karu Community)	20/05/2023	-Participation in the LSC - Feedback about the project -Ongoing Grievance Mechanism	Anjali Chaudhary, Shifali Guleria and Kumden Nanbal Luka
Stella Oneli U.	Stakeholder (Government Stakeholder-National Orientation Agency)			
Olanike Olugboji	Stakeholder (MD Local NGO-WISE)			

The list of households physically inspected and interviewed by the assessment team to verify the baseline scenario during the onsite visit is as follows:

S. No	Name	Location	Fuel type	Date	Subject	Assessment team members
1.	Salma Saifullah	Kano (Rural)	Charcoal	21/05/2023 to 22/05/2023	VVB field survey -Baseline stove type -Baseline fuel type -Fuel consumption and procurement patterns -Stove usage and meal patterns -KPT conducted at household	Anjali Chaudhary, Shifali Guleria and Kumden Nanbal Luka
2.	Taibat Hassan Ibrahim	Kano (Rural)	Firewood			
3.	Hajara Abubakar	Kano (Rural)	Charcoal			
4.	Habiba Shuaibu	Kano (Rural)	Firewood			
5.	Saudat Iliyasu	Kano (Rural)	Charcoal			
6.	Mariya Lawan	Kano (Rural)	Charcoal			
7.	Aisha Ibrahim	Kano (Urban)	Charcoal			
8.	Hajia Hafsat Abdullahi	Kano (Urban)	Charcoal			
9.	Tabawalo Suleman	Kano (Urban)	Charcoal			
10.	Aisha Liman	Kano (Urban)	Charcoal			
11.	Binta Ahmad Garko	Kano (Rural)	Charcoal			

The Validation team covered a total of 11 samples to confirm baseline scenario and verify the baseline KPT results. The 11 samples are spread across the urban and rural areas. All the households interviewed were found to have locally made unimproved metal tripod charcoal stoves and confirmed that KPTs were conducted at their household. Therefore, no discrepancies were observed.

It is to be noted that VVB employed telephonic interview with the LSC participants owing to their unavailability during the scheduled dates of the on-site audit. The stakeholders included the community leader, Government Representative and NGO representatives, whose input was considered crucial for comprehensive assessment of the PA. Given that the authenticity of the Local Stakeholder Consultation is assessed via the participants' verbal testimony, recorded telephonic interview was deemed appropriate as an alternate means of verification to receive inputs from stakeholders which otherwise wouldn't be possible, hence otherwise affecting the quality of assessment.

During the interviews, both physical and telephonic, it was observed that the respondents hold a positive opinion of the project activity and are aware of and look forward towards the benefits associated with the same.

1.9 Site Inspections

The VVB carried out an on-site audit from 20/05/2023 to 22/05/2023 and physically inspected the project technical design and implementation as specified in the SD VISta PD./5/

The on-site assessment was carried out with the objective to:

- Determine whether the project activity meets all applicable SD Vista requirements, including those specified in the standard, relevant methodologies, tools, standardized baselines and guidelines.
- Assess the accuracy, conservativeness, relevance, completeness, consistency, and transparency of the information provided by project participants.
- Determine whether information provided by the project participants is reliable and credible.

The site visit was conducted to validate the accuracy and completeness of the project description. The VVB team members who visited the site collectively had competence for the relevant technical area to which the project relates. The views obtained during site observation were considered while concluding the validation opinion.

The main topics covered during the site visit interview are as follows:

- General aspects of the project and its implementation
- Installation and operation of ICS under the proposed grouped project
- Assessment of baseline scenario and project boundary
- Authentication of the SDG impacts and monitoring and controlling instruments and operational arrangements.
- Analysis of the monitoring provisions by checking the monitoring arrangement.

The Sampling plan adopted by the VVB for carrying out validation assessment has been discussed prior in section 1.6. The list of end user interviewed by the assessment team is as follows:

S.No	Name	Affiliation	Date	Subject	Assessment team members
1.	Salma Saifullah	Baseline KPT sample	21/05/2023 to 22/05/2023	VVB field survey -Baseline stove type -Baseline fuel type -Fuel consumption and procurement patterns -KPT conducted at household	Anjali Chaudhary, Kumden Nanbal Luka
2.	Taibat Hassan Ibrahim				
3.	Hajara Abubakar				
4.	Habiba Shuaibu				
5.	Saudat Iliyasu				
6.	Mariya Lawan				
7.	Aisha Ibrahim				
8.	Hajia Hafsat Abdullahi				
9.	Tabawalo Suleman				
10	Aisha Liman				
11	Binta Ahmad Garko				

1.10 Public Comments

This project was open for public comment from 29/03/2023 to 28/04/2023. No comments were received by the project during the public comment period as confirmed from the project registry webpage /13/.

1.11 Resolution of Findings

This section summarizes the results of the project's validation process. The results of the document review, site visit evaluations, and interviews are presented in this section. CARs, CLs, and FARs are used to correct material inconsistencies discovered during validation.

Corrective Action Request (CAR)

Participants in the project have committed mistakes that will affect the project's capacity to deliver meaningful, measurable further emission reductions.

i. Specific methodological standards that are applicable have not been met, or

ii. There's a chance that emission reductions won't be able to be measured or tracked.

Clarification Request (CL)

It's used when more information is needed to properly understand an issue or when the data isn't clear enough to determine whether a condition has been satisfied.

Forward Action Request (FAR)

i. For the next verification period, the actual project monitoring and reporting processes demand attention and/or correction, or

ii. It is recommended that the MP be adjusted.

CARs and CLs will be resolved or closed if the PP changes the project description, corrects the PD, or provides sufficient further explanations or proof to address the concerns. If this is not done, the project activity will not be recommended for VCS registry registration.

In summary, the type and total number of findings that were raised are indicated below.

Type of Finding	CAR	CL	FAR
Total Findings	01	09	00

All the findings raised during this validation of the project are included under Appendix IV of this report.

1.12 Forward Action Requests

No Forward Action Requests (FARs) were raised during this assessment.

2 VALIDATION FINDINGS

2.1 Summary of SDG Contributions

The grouped project" UpEnergy-Social and Climate Impact Programme- Nigeria-1" is aiming to reduce GHG emission by replacing traditional cookstoves with highly thermal efficient Improved Cookstoves. The proposed project will contribute to 07 SDGs as U.N. sustainable Development Goals 1, 5, 7, 8, 12, 13 and 15.

The following table summarizes the project's direct contribution to the SDG through the implementation of the project activities.

S No.	SDG Target	SDG Indicator	Estimated Project Contribution by the End of Project Lifetime	Assessment opinion
1.	1.1	Average savings realized due to decrease in expenditure on basic service such as cooking	The distribution of energy efficient stoves helps save 0.22 $ per day per HOUSEHOLD.	The validation team reviewed the calculations in VCS Ex Ante ER Sheet/6/ and The SDG Impact Tool- Ex Ante/10/ and found the cost saving to be appropriate when operational cost alone is considered. As for capital cost, the review of the Simple Payback Calculation/17/ further validated that the one-time capital cost of ICS would be paid back on <1 month. The validation team found that the approach used to calculate cost of charcoal (weighted average of hardwood and softwood charcoal) is in accordance with current charcoal price in Nigeria/51/ and prominent literature documenting trends of softwood and hardwood charcoal across Africa (Nyarko, I.; Nwaogu, C.; Miroslav, H.; Peseu, P.O. Socio-Economic Analysis of Wood Charcoal Production as a Significant Output of Forest Bioeconomy in Africa. *Forests* **2021**, *12*, 568. https://doi.org/10.3390/f12050568)/47/ The value of parameter By,saving,i,j is found to be in accordance VCS Joint Validation and Verification Draft Report./42/ #CL1 was raised and satisfactorily closed for the concerned SDG target.
2.	*1.4*	Number of households having access to improved cooking technology	The distribution of 500,000 energy efficient stoves under the project helps in providing basic service access to household.	The validation team reviewed the project and found that 500,000 energy efficient ICS will be distributed by the PP to end users according to the project design. Clean cooking technology is the basic service provided by the project.

		due to project activity		
3	5.1	% of female employees	This project activity promotes employment to women, thus helps eradicating gender-based discrimination and provides socio-economic parity	It is validated from literature review of UpEnergy Staff Handbook/25/ and disciplinary code of conduct that the organization encourages diversity and does not condone discrimination of any kind. Employment records maintained by HR further validate this claim. #CL03 was raised and satisfactorily closed for the concerned SDG target.
4	5.4	Average time saving associated with cooking time.	In the poorest communities, the burden of collecting and/or purchasing fuel often falls on women and children. By reducing cooking time, the program provides women in project households with more time to invest in other productive economic development activities. Approximately 1 Hour/day/HOUSEHOLD cooking time can be saved from the project activity	This is validated by assessing the metrics in baseline survey and monitoring survey, the values of which corroborate with that in SDG Impact Tool – Ex Ante, thus saving 1 hour/day /HOUSEHOLD. #CL02 was raised and satisfactorily closed for the concerned SDG target.
5	*5.5*	Proportion of women serving in managerial/ leadership /ownership role	This project activity encourages participation of women in leadership / managerial role.	It is validated from site visit interviews that the project Contribute to generation of employment in informal sector (total economy, agriculture, and non-agriculture) by contracting locals with a target employment of 50% employees for varying lengths of time over the project lifetime with a focus on hiring females. The Up Energy Group Policy/24/, Disciplinary Code/25/ and Staff Handbook/26/ has been assessed to ascertain the PP's thrust towards equitable employment for women and marginalized groups and has been found appropriate and satisfactory. #CL03 was raised and satisfactorily closed with regard to the concerned SDG.
6	*7.1*	Number of households having access to improved	The project activity involves promotion and distribution of 500,000 improved cooking	The validation team reviewed the project and found that 500,000 energy efficient ICS will be distributed by the PP to end users according to the project design. Clean

		cooking technology due to project activity	stoves (ICS) in the households of Nigeria.	cooking technology is the basic service provided by the project.
7	8.b.1	Number of Trainings conducted in a year	The project activity provides training and skill development programs for the youth population, thus increasing their employability.	This is validated via assessment of training records, participation attendance and training curriculum provided by PP. It is validated through Training material /28/ and training attendance and Schedule/29/ that PP provides training on annual frequency basis. It is further validated from onsite visit interview/7/11/ that PP has conducted trainings as part of youth and women skill development initiative in its region of implementation. #CL03 was raised and satisfactorily closed.
8.	8.5	Number of jobs created	The project activity generates employment for marketing / sales and distribution / technical employees	This is validated through the employment records maintained by HR department. /7/. It is further confirmed by assessment team during on sit visit/7/ to the PP's office in Nigeria.
9	13.0	Tons of greenhouse gas emissions avoided	11,436,117 tCO_2e of greenhouse gas emissions will be avoided over a 7-year period	During assessment it is confirmed by validation team that the value 11,436,117 tCO_2e is correctly estimated which is validated through the assessment of the Ex-ante ER sheet/6/and SDG Calculation Tool-Ex Ante/10/
10	12.2	Decrease in specific fuel consumption.	Reduce the consumption of non-renewable biomass in participant households by as much as 50%, depending on stove model	It is validated from WBT tests that Baseline Charcoal stove has efficiency of 16.5% and from manufacturer's specification that ICS has efficiency of 37.9%. /44/. The same has been corroborated from the Manufacturer's specifications. /48/
11	15.1	Amount of Non-renewable biomass saved.	The Project will reduce 6,202,768 tons of Non-renewable biomass over a 7-year period in participant households and will contribute towards reducing deforestation	VVB team has examined parameter Bold which represents annual quantity of woody biomass that would have been used in the household in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project devices. According to methodology /8/, the value of B_{old} can be sourced from historical data or baseline surveys. The source of the data has been taken based on the KPT assessment and was found correct and acceptable upon checking the KPT excel sheet/39/. The description, source, and justification of choice of data is included in accordance with applied methodology /8/. The value is consistent with VCS Joint Validation and Verification Draft

				Report/42/ and ER calculation sheet/06/. The validation team had also conducted a survey to visit the households where KPT was performed to confirm the conduction of activity. A sample size of 165 was considered for Baseline assessment survey and Baseline KPT were conducted at 90 households which comprised of 45 Charcoal users/16/ and 45 firewood. The sample size for baseline KPT has been determined using the "Sampling and surveys for CDM project activities and programmes of activities, Version 09.0". The required sample size was calculated to be 27 each for both charcoal and firewood households. Hence the actual sample size considered for KPT for both charcoal and firewood households were 45 each which is more than the required sample size /adequate and in-line with the CDM Sampling requirement; the results thus obtained have met the reliability criteria of 95/10 for large scale project activities. The project activity aims to replace the baseline traditional / inefficient charcoal stoves with the charcoal ICS. Hence the baseline fuel consumption Bold = 5.46 tonnes/year/HH is applicable for project households that displaces charcoal. It is to be noted that while KPT has been conducted for both Charcoal and firewood based cookstoves, the PA intends to only replace traditional stoves running on charcoal. The results were validated from test results in the baseline survey report/16/ and KPT excel sheet /39/ and cross checking through the physical site visit with the households which were picked up as samples.

It is to be noted that all indicators utilized are specific to the project activity, Further, w.r.t the impact for SDG target 1.4 and 7.1, while the same monitoring indicator has been used, the resulting impact is two fold resulting in positive impact for both SDGs.

2.2 Project Design

2.2.1 Project Objectives

The project "UpEnergy-Social and Climate Impact Programme- Nigeria-1" aims to reduce GHG emission by replacing traditional cookstoves with highly thermal efficient cookstove. The Cookstove

project has contributed to 07 SDGs out of total 17 Sustainable Development Goals (SDG). The project activity is classified as U.N. sustainable Development Goals 1, 5, 7, 8,12, 13 and 15.

The Project has clearly stated its objectives in Section 2.1.1 of the SD VISta PD/05/

The project activity aims to provide more job opportunities **(SDG 8.5).** This includes managerial positions and on ground work force. The project aims to create employment which project activity specific and through a carbon technical team, which will provide advisory to all UPE Group undertakings. The project aims to provide skill development and training to the local population to help them hone their talents and become 'employable'. **(SDG 8.b)..** The project activity aims to recruit women in the workforce and envisages that 50% of its employees will be female. **(SDG 5.5)**

The project will improve food security and nutritional status. Time to prepare food will decrease by using ICS because the ICS are 37.9% more efficient as compared to traditional cookstoves used by end users earlier. The time saved will allow the female population, who are primarily involved in cooking, to invest time in other pursuits like education **(SDG 5.4).**

. Ensuring the widespread availability of ICS (Improved Cookstoves) guarantees that the public can access clean energy sources **(SDG 7 and 1.4).** Additionally, enhancing the efficiency of biomass fuel usage reduces fuel consumption, thereby decreasing household spending on fuel wood and poverty **(SDG 1.1).** This efficiency also leads to lower greenhouse gas emissions (**SDG 13**), a reduction in biomass fuel usage **(SDG 12**), and less deforestation for fuelwood access (**SDG 15).**

The ICS's efficiency has been validated from the technical specifications provided /48/ and the WBT test results/44/. Training to the local people which is confirmed through training manual and training records/28/29/. Reduced inequality in the area which is confirmed through equal work opportunity policies and non-discrimination policies of the PP/24/25/26.

Project is expected to reduce GHG emission by 16,33,731 tCO_2.eq per year by distributing the Smart Home Pro Improved Cookstove.

2.2.2 Project Activities

In the SD VISta PD section 2.1.2 Description of the project activity explained the project activity in detail. During assessment following points are concluded by the validation team which are mentioned below:

The project activity is a grouped project. The ICS will continue to use non-renewable biomass for cooking, but the ICS will use less wood fuel to meet thermal needs because it has higher thermal efficiency, which will result in a reduction of GHG emissions compared to the baseline scenario. It is replacing conventional cooking solutions with fuel-efficient improved cookstoves, which falls under the category of efficiency improvements in thermal applications.

The Smart Home Pro is a domestic stove with thermal efficiency of 37.90%. It has dimensions ø 28 * 26 H cms, and weighs 12kgs, with a flat bottom pot type. It utilizes charcoal and has a life span of 7 years. This verified from the UpEnergy group technical specification sheet-Smart Home Pro/48/. It is estimated tin Nigeria in that 500,000 ICS will be distributed in Nigeria during the project lifetime/5/42/.

The primary thrust of the project is distribution and installation of ICS. For the same, field staff have been provided with education and training so they may implement, monitor, and evaluate the project.

The project also provides training to locals to recruit them as staff, thus providing employment, and to also develop their employable skill which will allow them to find work, post culmination of project activity. The Project activity also results in uplifting women, by providing them employment opportunity and leadership roles. Additionally, women and girls being primarily responsible for collection of fuel and cooking, now can save time which can be used in other pursuits. The reduction in burn risk, indoor air pollution and long hours also ensures they have healthier lifestyles.

2.2.3 Implementation Schedule

Implementation schedule is discussed in section 2.1.3 of PD. The first important date is May 2022 which is when UpEnergy as an organization has started distributing ICS in the project area. The start date of the grouped project activity, as identified by the PP is 07/05/2022, which is also the date of installation of first ICS under the Grouped project activity. This is validated through the end user signed receipt of salle of first stove unit (UID:VSP00045) /14/

The stakeholder meeting was held on 23/06/2022. The start date is assessed from the stakeholder consultation reports and records/15/.

The baseline survey was conducted by PP from October 2021 to January 2022 which is verified from the baseline survey records /16/.

In August 2022, the project applied for registration under VCS and SD VISta labelling which is verified from the project webpage on verra website - https://registry.verra.org/app/projectDetail/VCS/2673. /13/

2.2.4 Project Proponent and Other Entities Involved in the Project

UpEnergy Group is the project proponent. An end user agreement/18/ has been signed by each participating household confirming the ownership rights of the carbon credits generated from this project belong solely to the project proponent. ESPL has checked the End User Agreement/18/ and verified the same. Climate Catalyst, Nigeria Ltd. Is the Project Representative. It is a subsidiary of the UpEnergy Group. VVB has assessed the Share Certificates which establish this relationship between the two entities. /19/

2.2.5 Project Type

The project is a non-AFOLU, group project. The project is dealing with the energy efficiency sector primarily. The validation team assessed the project and confirmed that it contributes towards 07 SDG goals which are 1, 5, 7, 8, 12, 13 and 15.

Sustainable2.16 Development Verified Impact Standard Sectoral Scopes	U.N. Sustainable Development Goals
Sectoral Scope 1- AFOLU	Life on Land (15.1)
Sectoral Scope 2 - Climate Change Adaptation	Climate Action (13.0)

Sectoral Scope 4 – Energy	Affordable and clean energy (7.1)
Sectoral Scope 10 – Livelihoods	No Poverty (1.1/1.4) Decent Work and Economic Growth/Global strategy for youth employment (8.5/8. B.) Sustainable Management & efficient use of natural resources (12.2.)
Sectoral Scope 14 – Women's Empowerment	Gender Equality (5.4/5.1/5.5)

2.2.6 Project Location

The location of this project activity is the geographical boundary of Nigeria with the geographical coordinates 9°4'55.2 latitude and 8°40.517 longitude. It has been validated using the Google Earth software/21/. The geographical coordinates of the PAI were also confirmed through the Get-geocoordinates mobile application during the VVB on-site audit. The information made available by the PP, the distribution database consisting of stove location within Nigeria/20/and the geo-coordinates obtained by VVB/07/ have been assessed during the site visit and found to be consistently defining the project location as the geographical boundaries of the host country, Nigeria. Therefore, this was found to be acceptable by the VVB.

The project intends to distribute ICS to the entire country, and during baseline survey, a diversity in samples was ensured and 165 households spread across rural, semi-urban and urban areas in Nigeria and targeting all the key geographical areas of Nigeria, i.e., Northern Region, Southwest Region and Southeast Region were considered.

Nigeria is divided into 37 regions. To facilitate the management, implementation, monitoring and sampling stages of the project, the project proponent divides the project boundary into 6 project regions according to the geopolitical zones of Nigeria . Hence the ICS will be distributed across Nigeria in any of the following regions:

No.	Project Region	Administrative Districts
1.	North East	Adamawa, Bauchi, Borno, Gombe, Taraba, Plateau and Yobe
2.	North Central	Benue, Kogi, Kwara, Nasarawa, Niger, and Federal Capital Territory.
3.	North West	Jigawa, Kaduna, Kano, Katsina, Kebbi, Sokoto, and Zamfara
4	South East	Abia, Anambra, Ebonyi, Enugu, and Imo
5.	South South	Akwa Ibom, Bayelsa, Cross River, Delta, Edo, and Rivers
6.	South West	Ekiti, Lagos, Ogun, Ondo, Osun, and Oyo

The geodetics of all future sites wherein ICS distribution will take place over the course of the project lifetime would be clearly indicated in the relevant ER sheet and geodetics of ICS administrative districts will be captured in SD VISta monitoring report for each monitoring period.

2.2.7 Baseline Scenario

In the absence of project activity, the baseline scenario is that the target population continues to consume non-renewable biomass fuel to meet similar thermal energy needs as provided by project ICS cookstoves. The target population, prior to project activity, also exhibited multidimensional poverty, with indoor air pollution arising from traditional cookstoves also making the female population particularly susceptible to respiratory ailments. This has been validated from results. In addition to this the time spent on gathering fuel, also depletes children and women from pursuing other useful activities.
The same has been assessed from the baseline study conducted by Project proponent/16/, study conducted by National Bureau of Statistics, Nigeria/40/, World Bank Reports/52/ and further validated by interviewing the end users during the site visit/7/11/.
The depleting tree cover in Nigeria was validated from Global Forest Watch Metrics/53/ and further confirmed by on-site observations.

2.2.8 Causal Chain(s)

The Validation team of ESPL assessed the causal chain mentioned in section of 2.1.9 of SD VISta PDD through site visit interview and supportive documents submitted by PP.

Following documents are assessed by the validation team to validate the causal chain:

SD VISta PD/05/

VCS Draft Joint Validation and Verification Report /42/

Project database/20

Baseline assessment report/16/

VCS_Ex-ante ER sheet_2673/06/

SDG Impact Tool – Ex Ante /10/

Simple Payback Calculation /17/

Manufacturer's Specifications /49/

Training material and training attendance records/28,29/

Warranty cards with End-user Carbon Waiver agreement. /18/

Employment Records /33/

Labour Policy of PP/24/27/

Blind Assessment and Consultation Feedback forms /54/

Grievance Redressal Records/31/

Peer Reviewed Scientific Papers/47/

Studies conducted by National Bureau of Statistics, Federal Government of Nigeria/40/

No SD VISta assets have been generated by the project.

2.2.9 Threats to the Project

The steps taken to assess the likely natural and human-induced threats identified by the project to the expected sustainable development benefits during the project lifetime are discussed below:

Nature-induced Threats		
Threats	**Solution**	**Conclusion**
Vulnerability to natural disasters, Nigeria is prone to droughts and floods since the last few years, and this could lead to displacement and usage discontinuance of the project device arising from mass migration.	The project device made available with the project activity is mobile, light weight and can be carried by the device user easily for long distance.	As confirmed by the assessment team during the site visit /7/ interviews with end users /11/ and review of the manufacturer's specification/53/ of ICS, the project stove is mobile, light weight and can be easily rebuilt with the available material in the village. The assessment team has physically verified the stove weight, scope for mobility and reassembly of the project stove during site visit. /7/ Thus, the threats due to climate Crisis induced displacement/migration of the ICS is negligible.
Climate change and deforestation can lead to charcoal scarcity. Climate change negatively affects agricultural yields, reducing reliable income streams in the local community and thus availability of funds to purchase the project device.	Although scarcity would seem to support the use of ICS technology, there can be a foreseeable future where the effort and economics behind procuring charcoal could make other fuels a more sustainable option. UpEnergy will plan regular communication with the stakeholders involved with project activity and will encourage discussion on sustainable management of natural resources.	The assessment team confirms that the PP keeps abreast of developments in the field as in constant contact with concerned stakeholders. The PP is also committed to developing and evolving as 'technology agnostic', focusing on 'on sourcing the best possible solutions for local contexts.', as stated on their official website/13. The same has been verified by assessment of their project list/49/, which showcases innovations like e-cookstoves, thus ensuring that innovation in cookstove technology will be introduced in case of change in fuel status
Human-induced threats		
Altering the stove design or neglected maintenance of the project device can lead to reduced output from the device	UpEnergy has a dedicated sales team on ground who are duly trained with handling and mechanics of the project device who will continue to assess the condition of the project device at regular intervals to avoid the above-mentioned threat. Moreover, UpEnergy's sales team will also train and	Assessment team during the interviews/11/ with the end-users received positive feedback regards with UpEnergy's grievance redressal mechanism. End Users responded positively when asked about the after-sale care provided by UpEnergy and Climate Catalyst. It is also concluded from interview with beneficiary that UpEnergy representatives have carried out awareness exercises to inform HOUSEHOLD of working and maintenance of the stove.

	educate the beneficiary household about the working and maintenance of the project device.	Interviews with the on-ground Sales Team also confirmed their robust assessment of stoves conducted regularly. Assessment of Training Records, Participation attendance/29/ and Training material/28/ by VVB confirms the skill and knowledge of the on-ground team regarding the maintenance and functioning of the ICS. It is concluded from site visit interviews that PP conducted routine spot audits to detect defects and issues in the stove maintenance and functioning. Moreover, the lifespan determined ex-ante is confirmed as 7 years as per the technical specification of the cookstove/35/. The stoves beyond their lifetimes will be eliminated from the database automatically.
Slow progress in the population's perception to adopt new technology resulting in poor sales.	UpEnergy's on ground team will make efforts in the project area to explain the depth of the project in participants' native language and from their cultural perspective, so that they can reap all the benefits available from the undertaken project.	It is confirmed during site visit interviews and desk review that the PP the awareness measures as proposed by the PP are robust and reasonable and implementable. Records from LSC/30/ confirm that information is mediated to beneficiaries in their local language.

2.2.10 Benefit Permanence

The following documents are assessed by the validation team to validate the project's benefit after project activities cease.

- Project database/20/
- Training material and records/28/29/
- End User Agreement and Proof of start date /18/14/
- Stakeholder Consultation Meetings/15/30/
- Interviews with stakeholders and end users during site visit/11/
- Literature Review (Appendix III)

In the project documentation (/5/, it is stated that to ensure the long-term sustainability of the ICS project and the lasting advantages of ICS and other program benefits, PP has committed to the following long-term objectives:

1. Regular awareness campaigns will be conducted to promote the various benefits of adopting the project's ICS. This information was confirmed by the assessment team during their on-site visit (/7/) and through additional sources such as training session records (/28/29/), copies of flyers (/38/), and LSC records (/30/).

2. The warranty period for the project's ICS will be extended to a duration of 5 years. This extension has been verified through warranty cards issued to end-users (/18/).

   Apart from this PP has also developed a continuous grievance redressal mechanism which continuously addresses the challenges associated with distribution and use of ICS or any other concern associated with the project activity to foster trust and sense of reliability amongst beneficiaries. UpEnergy also provides training/28/ to locally recruited staff which ensures development of employable skills, thus ensuring their ability to secure livelihood even when the project ceases.

2.3 Stakeholder Engagement

2.3.1 Stakeholder Identification

To assess the process of stakeholder's identification following steps are taken by the assessment team:

1. Review of SD VISta PD/05/.
2. Section 2.2 – SD VISta Standard/01/
3. Local Stakeholder consultation Report/15/.
4. End user agreements/18/.
5. Invitation Emails, Newspaper Advertisement, and List of attendees/30/.
6. On- Site visit by the validation team with interviews with PP and the local stakeholders/7/11/.

Stakeholders identified in the project are:

Direct Stakeholders- these are group of people who are directly impacted by the project, such as end users, ICE manufacturers, training personnel, etc.

Indirect Stakeholders- group of people who are indirectly involved such as women self- help groups, NGOs etc.

The Validation team via desk review and interview with stakeholders (including end users, community leaders, grassroot NGOs and government representatives) confirms that the direct and indirect stakeholders identified are appropriate and comprehensive, wherein no potential stakeholder is left out of the purview.

2.3.2 Stakeholder Description

As assessed in the previous section, the stakeholders identified in above section 2.3.1 and the means of validating them are described below:

Current Beneficiaries: Any family/individual/ woman who is involved in cooking using traditional cookstoves and shows interest in adopting ICS is referred as current beneficiary. Family members/ people residing in the same household compound are referred to as beneficiary families. VVB assessment team during site visit/7/11/ interviewed such families and found that they had been given information about the benefits of ICS and were willing to adopt it. It is to be noted that the baseline survey was conducted in houses across rural, semi-urban and urban households, in order to ensure diversity within the beneficiaries for comprehensive assessment. Further it was also ensured that the respondents are not clustered in single or similar geographical areas, hence households from across Nigeria i.e. Northern region southwestern region and South-Eastern Region were considered. This

ensures that diversity is maintained within the stakeholder group and a variety of households is considered.

Potential Beneficiaries: While Current and Potential beneficiaries have similar characteristics, the primary difference arises from lack of awareness of lack or financial capability to afford ICS. UpEnergy conducts awareness programs to engage more people in Project Activity. The same has been assessed during on site visit/7/11/ and by stakeholder consultation evidence provided by PP./30/15/

Local Vendors: This refers to those who are involved in supplying charcoal to the project area. The PP identifies probable negative impact and has chalked out ways to mitigate the same. The same has been elaborated in Section 3.1.3.

Some indirectly affected stakeholders identified include Local NGOs and Business, Government Authority, Media, and Academic institutions in the host country; all the stakeholders are described in detail, which was confirmed by VVB via telephonic interviews with stakeholders like community leaders, government officials and representatives of local NGO.

Apart from the beneficiaries, the PP identifies two categories of stakeholders poignantly affected by the PA:

Local Implementation Partners: Climate Catalyst, the local entity of the UpEnergy Group in the Host country collaborates with a number of local implementation partners. This includes Distribution Agents, Laboratories, NGOs etc. VVB assessed the PP's involvement with government entities and NGOs via interview with government officials (from National Orientation Agency) and grassroot NGOs (MD of local NGO, WISE). Implementation Partners are chosen on the basis of prior experience and penetration in the community. It is often observed the PIs are not equipped with knowledge of ICS and PP conducts awareness sessions for them, this has been confirmed via interview with NGO representatives who confirmed that climate catalyst representatives, briefed them about ICS.

CCL Employees of Host Country: The unemployment rate in Nigeria is 5.4% and the PA, not only provides employment opportunity to locals, but also conducts skill development training ensuring their employability even after PA ceases. The same has been further elaborated in Section 3 of this report.

The validation team verified the information from the end user agreements/15/ signed by all the end users shared by PP and the newspaper advertisements, stakeholder meeting recordings and the list of attendees/28/.

2.3.3 Stakeholder Consultation

The local stakeholder consultation process has been described under Section 2.2.3 of the SD VISta PD/1/. The Project Participant correctly identified the relevant stakeholders such as local NGOs, representatives of local authorities, target project ICS users. The local stakeholder meeting was conducted on 23/06/2022. The participants across the host country (Nigeria) were invited and informed about the meeting through email invite, newspaper advertisement and Linkedin/social media announcement notifying the date, time, and location of the event. The attendance sheet, photos and videos of the local stakeholder meetings were submitted as evidence by the PP/30/.

It is to be noted that the email sent to stakeholder participants, dated 24th May, 2022, mentions both Energy efficient cooking technologies and Safe Water Systems. It has been confirmed by VVB via interview with LSC Participants, that while information of both devices were provided, it was clarified that both would be different PA

All questions raised by stakeholders were answered and documented by the PP and their representatives. Stakeholders had no comments/complaints/grievances by the end of the meeting which could have any significant modification in the project description or its design. The date and mode of invitation were confirmed from telephonic interviews of the LSC participants conducted by validation team. VVB validation team was also able to confirm through the interviewed stakeholders that they were part of the LSC meetings conducted by the PP and were found to be aware about the proceedings of the meeting including benefits of the improved cookstove, including lesser smoke, lesser time in wood collection, lesser wood consumption, etc. As per the VVB's assessment, PP has addressed all questions and responses of all the stakeholders with satisfaction and for future grievances PP has provided the communication details that can be used for placing the complaints after the implementation of the project.

The PP has a continuous grievance mechanism in place for the local stakeholders. The beneficiaries of the project ICS have been provided with the following means to contact the PP:

Directly registering complaints at the nearest cell office or reaching out to retail partners.

A toll-free helpline on which the end users can seek assistance.

E-mail at technical@upenergygroup.com

Evidence on the collection of grievance feedback from the end-users is provided by PP (photographs of the grievance/feedback notes), thus the requirement is identified as being fulfilled/29/.

It is important to highlight that while ICSs were distributed prior to the first stakeholder consultation, efforts were made to ensure that stakeholders had the chance to assess impacts, raise concerns about potential negative effects, express their desired outcomes, and provide input. The physical stakeholder consultation meeting held on June 23, 2022, was confirmed to be in compliance with the requirements of VCS Standard version 4.2, section 3.17, which was the most current standard at that time. Additionally, the project's consultation process also adhered to the requirements of VCS Standard version 4.4, paragraphs 3.18.3 to 3.18.5, applicable during the validation phase.

Since the project was initially developed as a VCS project and later integrated into the SD VISta program, there was no need to separately demonstrate compliance with the requirements of Section 3.18 of VCS Standard version 4.4, which includes the Local Stakeholders Consultation process. The VCS Project Description (PD) was made available for public comments from March 29, 2023, to April 28, 2023, after which the SD VISta labelling process was undertaken for the project. As required by VCS Standard version 4.4, the local stakeholder consultation took place before validation, with the project proponent (PP) fully complying, ensuring local stakeholders had ample time to provide feedback and express concerns.

In May 2022, the PP distributed a single batch of ICSs, with only 73 units (~4.4% of the total distribution) distributed before the physical stakeholder meeting, as recorded in the project's cookstove distribution database. The PP received no specific comments or feedback on the design of the improved cookstove during the stakeholder meeting, so the original design remained unchanged.

Furthermore, in line with VCS Standard version 4.4, paragraph 3.18.4, the PP maintains an ongoing communication channel to encourage various stakeholders to provide feedback on the project's impact, design, and other aspects through a continuous stakeholder feedback process, as outlined in Sections 2.2.2 and 2.2.10 of the SD VISta project description, which was previously assessed in the validation report.

Additionally, no negative feedback or comments related to the project design were received from any stakeholders up until the submission of project documents to VERRA on November 7, 2023. The VVB also observed, as detailed in section 1.8 of the Validation Report, that during both physical interviews with end users and telephonic interviews with other stakeholders, all interviewees expressed positive opinions about the project activities and confirmed that the project benefits were being realized. Therefore, the VVB concludes that the stakeholder consultation process was effective and adequate.

2.3.4 Continued Consultation and Adaptive Management

The following steps have been taken to assess the project's plan for continuing consultation and adaptive management with the stakeholders.

1. Review of SD VISta PD/5/.
2. Local Stakeholder consultation Report/15/.
3. Invitation Emails, Newspaper Advertisement, and Invitation List/30/.
4. UpEnergy Website announcement and Flyers/30/37/
5. Site visit audit by validation team and on-site Interviews with PP and stakeholders/7/11/
6. List of Attendees and list of electronic Feedback providers/30/
7. Supplementary photos of LSC Meeting/30/
8. Filled Stakeholder Evaluation Forms/30/.
9. Grievance Redressal Records/31/

The assessment team validated that the project plan to engage in continued stakeholder consultation and adaptive management of the project, as described in Section 2.2.4 of the SD VISta PD. The information given in SD VISTA PD is found correct and appropriate with the information given in the supportive evidence. The PP mentions that quarterly feedback is taken from stakeholders by the sales visit. The same has been validated by on site visit.

2.3.5 Anti-Discrimination

The validation team checked and confirmed that UpEnergy Group and its Subsidiary Climate Catalyst/19/ does not discriminate based on race, age, color, sex, national origin, physical or mental disability, or religion. PP have UPE Group Staff Handbook /39/ which are validated during validation process and during site visit/28/ interviews with the workers it is confirmed that no discrimination based on race, age, color, sex, national origin, physical or mental disability, or religion by the PP.

2.3.6 Worker Training

The PP conducts continuous learning and training sessions for employees who are recruited from the local community. Interviews during the site visit confirmed employees were trained and well-versed in the skills needed to carry out their jobs.

The assessment team validate the information from several sources, which are:

1. Training Records and Participation Attendance/29/
2. Training coursework- PPTs/28/
3. Employee Records/32/

The audit team deems that the project has properly identified the training needs and delivered adequate capacitation to project's workers for them to perform their activities in a safe and effective manner.

2.3.7 Equal Work Opportunities

The validation team assessed and confirmed that UpEnergy and its subsidary Climate Catalyst provides equal employment and advancement opportunity to all regardless of age, gender, race, religion, colour, disability, national origin, or any other legally protected category which is mentioned in Non-discrimination policy in Section 5.4 of the UPE Group Staff Handbook /26/which was validated during validation process and during site visit/7/ interviews with the workers it is confirmed that equal work opportunities are provided to all the workers. Further the UPE Disciplinary Code /25/ was assessed, wherein strict repercussions to any instance of discrimination amongst workforce is noted, to further validate the above.

2.3.8 Workers' Rights

The project activity is in compliance with laws including national, sub-national, state, and local, as well as policies, laws, rules, and regulations.

Since Nigeria is a part of ILO convention, the project activity is also in accordance with the terms and conditions as per Core Labor Conventions of the International Labor Organization (ILO) which has been validated during desk review.

The assessment team also assessed the UPE Group Policy/24/, Staff Handbook/26/ and Health and Safety Policy /27/ and found it to in accordance with the labor laws mentioned in section 7(3) of the Constitution of Federal Republic of Nigeria (1979)/36/

The assessment team also carried out literature review to assess the same. The team referred to scientific writings/35/ and came to the same conclusion as established above.

2.3.9 Occupational Safety Assessment

The validation team assessed and confirmed that UpEnergy Group's Health and Safety Policy (2023 Version)/27/ abides by the National Policy on Safety, Health, and Environment at Workplace.

It was observed during site visit/7/ that UpEnergy provides necessary protection instruments such as safety shoes, gloves, helmets, glasses etc. to protect the health and safety of the employees involved in manufacturing and warehouse handling. It was observed on site that though not required for an ICS distribution project per say, the PP undertakes it to follow the National Policy on Safety, Health, and Environment at Workplace.

2.3.10 Feedback and Grievance Redress Procedure

Section 2.2.10 of the SD VISta PD describes the Feedback and Grievance redressal Procedure via a Flowchart which earmarks 6 steps. The steps include:

Informal complaint by end user discussed with field Coordinator.

Field Coordinator and End user attempt to solve issues informally.

If unresolved, formal process initiated by filling written form, in the grievance expression book in Lagos, Nigeria. Alternatively, a telephonic complaint is registered via toll free numbers (+234-09099999227 / 0706879780)

Grievances are assessed and vetted, and appropriate resolution offered.

The primary approach to solve any grievance is via the traditional means of verbal reporting of complaint, followed by informal one on one conversation, between the beneficiary and the field coordinator.

Resolution may be immediate as per the requirement of end user.

Resolution may be complex and time and resource intensive, wherein it is referred field coordinator to Implementation Partner to operation manager to company lead to head office, depending on complexity.

The above two processes are validated via interviews conducted with end users and the coordinators during on-site visits. /7/. VVB has assessed the above my checking functionality of the provided contact numbers and checking presence of grievance records at site office during OSV. ICS distribution receipts/20/ and flyers/37/ have also been assessed to validate the same.

2.3.11 Feedback and Grievance Redress Procedure Accessibility

PP has a continuous grievance mechanism in place for the local stakeholders. The beneficiaries of the project ICS have been provided with the following means to contact the PP:

- Directly registering complaints at the nearest cell office or reaching out to retail partners.
- A toll-free helpline on which the end users can seek assistance.
- E-mail at technical@upenergygroup.com

The complaints log, referred to as the grievance book, is stored at the Climate Catalyst office in Nigeria, located at 'Close 48, H167, VGC, Lagos, Nigeria'. This office was confirmed to exist during the site visit marked as visit/7/. Additionally, the PP has provided accessible channels for registering complaints, including a toll-free telephone number and an email address. Both these communication methods have been verified and found to be operational. Furthermore, the legitimacy of the ICS distribution receipts /20/ and flyers /38/ has been examined and confirmed.

2.3.12 Stakeholder Access to Project Documentation

Section 2.2.12 of SD VISta PD mentions that printed copies of Project Design Document are made available to stakeholders at Climate Catalyst Ltd.'s offices. The presence of the same was confirmed by VVB during on site visit. /7/

2.3.13 Information to Stakeholders on Validation and Verification Process

The PP notifies the end users and their families that they are a part of a project that provides the improved cookstove at subsidized cost to enhance respiratory health, family finances, reduced cost of fuel and time saving and the environment. They are also made aware of ICS generated carbon credits credits which in turn are used to cover the cost of ICS production and distribution through End User Warranty Card/18/.

The individuals throughout Nigeria who took part in the event were notified about the meeting via email invitations, newspaper ads, and announcements on LinkedIn and social media. These notifications included details about the event's date, time, and venue. The PP/30/ submitted the attendance records, along with photos and videos from the local stakeholder meetings, as supporting evidence. /30/

Further it was confirmed that the PA was in compliance with paragraph 3.5.5 of the SD VISta program guide/2/ which states that," The project proponent shall also provide notification of any upcoming assessor site visits to potentially affected stakeholders, preferably with 30 days' notice. Such notification shall indicate the assessor's name, assessment team leader, dates, and locations of the audit, contact details, and means of communicating with the assessment team." The end user had been intimated of all the above pointers by local, on ground staff, 30 days in advance to the assessment team's visit in May,2023. This was verified via interviews with various stakeholders/11/.

2.4 Project Management

2.4.1 Avoidance of Corruption

As per the SD VISta PD /05/, UpEnergy has provided details of the anti-corruption regarding the project and in general. UpEnergy's policy /24/ in this regard was assessed and confirmed further during the interviews with the staff of UpEnergy, its associates and end users. No evidence of any form of corruption or illegality was found during the same.

The PP has Employee Disciplinary Code which insists a strong punishment up to criminal prosecution / termination of job for the bribery / forgery related offences. This has been verified from Annexure 1 of UPE Group Staff Disciplinary Code. /25/

The audit team believes that the project management has created and established a solid and thorough framework to prevent the commission of any form of illicit acts by project proponent after evaluating all of the aforementioned policies. During desk review and site visit, there was no indication of any kind of corruption or unlawful activity conducted in the project activity.

2.4.2 Recognition of Property Rights

SD VISta PD, in section 2.3.3, mentions that ICS were distributed at subsidized rates to end users and all property rights of ICS belong to end users, while carbon credit generated by the project belongs to UpEnergy which assessed via Warranty card and end user agreement/18/. The same has also been confirmed during the site visit/7/ that no property rights were transferred by the end users to the UpEnergy.

2.4.3 Free, Prior and Informed Consent

In SD VISta PD section 2.3.4 'Free, Prior and Informed Consent' mentions that it is a voluntary project. End users are free to choose whether they want ICS or not. Warranty certificate of End User/18/ are signed between the end user and PP if he wants to take part in the project. The validation team confirms the information during desk review and site visit interview with beneficiaries who confirmed that they were participating in the project with free will, without any outside coercion.

2.4.4 Restitution and/or Compensation for Affected Resources

The validation team confirmed during the site visit that the project is solely involved in distribution of ICSs to individual households only and it will not affect any resources, natural or otherwise. Hence there arises no necessity for restitution or compensation of any kind.

2.4.5 Property Rights Removal/Relocation of Property Rights Holders

The validation team confirmed that the project is not involved in any removal of property rights or relocation of property rights holders. The project involves distribution of ICSs to individual households only and it will not involve any land use or acquisition. It is validated by ESPL assessment team, and the Warranty certificate of End User/18/ mentioned clearly about the rights of UpEnergy and End Users in the project and the same is confirmed during the site visit/7/11/.

2.4.6 Identification of Illegal Activities

In SD VISta PD section 2.3.7 Identification of Illegal Activities mentioned that there are no illegal activities found which could affect the product activity. The validation team confirmed this during site visit interviews. Avoidance of corruption is already discussed in section 2.4.1 of this report. UpEnergy Group has a stringent group policy for preventing the discrimination in any form and does not tolerate any form of unlawful discrimination. This has been verified from Section 5.4 of UPE Group Staff Handbook. /26/. VVB assessment team did not find any instance of unlawful activities including corruption and discrimination during the course of the validation process.

2.4.7 Ongoing Conflicts or Disputes

In SD VISta PD section 2.3.8 Ongoing Conflicts or Disputes, mentions the inaptness of the issue, given the installation of ICS does not affect property right. It is to be noted that there is no ongoing or unresolved conflicts or disputes over rights to lands, territories and resources and any disputes that were resolved during the last twenty years and validation team has not found any evidence of ongoing conflicts or disputes.

2.4.8 National and Local Laws and Regulations

The ESPL validation team did not detect any incompliances related to laws, statutes, and regulatory frameworks about the application of improved cookstoves in Nigeria. It validated during desk review, site visit interview/7/ and through web search that UpEnergy and its local partners obey all relevant Nigerian local laws and regulations.

The initiative is voluntary, as Nigeria lacks a mandate for ICS distribution (/23/). Additionally, the project falls outside the scope of the Environmental Impact Assessment (EIA) under Nigerian laws and regulations. This was confirmed through the General Guidelines and Procedure for Environmental Impact Assessment in the Federal Republic of Nigeria (/22/).

An assessment of UpEnergy's Group Policy/24/ validates its conformance to all local laws and regulations. Carbon Catalyst, being a subsidiary of UpEnergy (as assessed via Share certificates /19/) also functions in accordance with the Group's policies.

2.4.9 Project Ownership

UpEnergy Group is the project proponent. The project device, i.e the Improved Cookstove, is sold to end users at a subsidized price and is the property of the beneficiary. This has been confirmed via assessment of warranty card/18/ and interview with PP representatives and end-users/11/ during site visit. An end user agreement/18/ has been signed by each participating household confirming the ownership rights of the carbon credits generated from this project belong solely to the project proponent. ESPL has checked the End User Agreement/18/ and assessed the same.

2.4.10 Grouped Projects

The project is a grouped project activity. It is about distribution of energy efficient stoves for household cooking purpose in Nigeria. Eligibility criteria for all new Group project activity instances to be added during the crediting period are specified in Section G1.1 of the Sustainable Development Verified Impact Standard/01/.

Section 2.3.11 of the SD VISta PD /05/, establishes the necessary eligibility criteria to ensure that inclusion of all new project activity instances is in accordance with the requirements detailed in the SD VISta Standard /01/.

3 BENEFITS FOR PEOPLE AND PROSPERITY

3.1.1 Condition of Stakeholders at Project Start

SD VISta PD section 3.1 describes the Condition of Stakeholders at Project Start. PP has adequately explained the circumstances of the stakeholders in PD, who are described as Beneficiaries (end users), Local Vendors, Local NGOs and Business, Government Authority, Media, and Academic institutions in the host country; all the stakeholders are described in detail, which was confirmed by VVB via physical interview on site with end users and telephonic interviews with stakeholders like community leaders, government officials and representatives of local NGO. Thus, validation team has confirmed the baseline scenario of both the direct and indirect stakeholders of the PA.

Validation team has confirmed the information during site visit interview with different stakeholders, including representatives of PP, beneficiaries, leaders of local community, grassroot NGO and government official, and found all the information in PD to be accurate. VVB has further corroborated on site observations with results of studies conducted by National Bureau of Statistics (Nigeria), /40/ the Baseline Survey /16/conducted by PP in January 2022 , KPT Records /39/ and other peer reviewed papers on the subject. /47/

It is to be noted that the baseline has been assessed at the national level since the project boundary is the entire country of Nigeria i.e. within the boundary of Nigeria having the geographical coordinates 9°4'55.2 latitude and 8°40.517 longitude.

VVB has confirmed the intended national implementation of PA via the Baseline Survey Report Conducted by PP along with ICEED /16/ which documents that baseline survey was conducted for 165 households spread across rural, semi-urban and urban areas in Nigeria and targeting all the key geographical areas of Nigeria, i.e., Northern Region, Southwest Region and Southeast Region. In line with the urban / rural demographic breakup of Nigeria[1], the considered 165 samples were split into 2 strata i.e., 47% to be sampled from urban areas, and rest 53% to be sampled from rural areas. The sample selection of households from the identified key localities was done through a combination of stratified and random sampling.

Hence, the VVB deems a national level assessment of baseline condition appropriate.

3.1.2 Expected Stakeholder Impacts

Section 3.2 of the SD VISta identifies the expected stakeholder impacts of project activity. The following table summarizes the means used to assess the expected impacts on each stakeholder group resulting from project activities:

Impact #1	Access to Improved Cooking Technology

[1] https://population.un.org/wup/Publications/Files/WUP2014-Highlights.pdf (refer page # 25)

Type of Impact	Positive, actual, direct
Affected Stakeholder Group(s)	Beneficiaries & beneficiaries' families
Resulting Change in Well-being	Since Cooking is a fundamental part of life, increased access to clean cooking to the deprived sections of society will increase their access to basic services necessary to lead a healthy and productive life. The project activity aims distribution of 500,000 energy efficient stoves which helps in providing basic service to beneficiary households
VVB Assessment	The validation team confirmed the information from the document review, sectoral expertise and site visit interviews with various stakeholders including PP, end users, community leaders and local NGO, confirms the expected impact of this project on the Affected Stakeholder Group(s). The description in section 3.2 of the SD Vista PD /05/ is deemed appropriate, correct, and feasible.

Impact #2	Reduction of time spent on unpaid domestic work
Type of Impact	Positive, Predicted, Direct
Affected Stakeholder Group(s)	Beneficiaries (most notably, female, elderly, and children, primarily girls)
Resulting Change in Well-being	Females who spend a copious amount of time on unpaid domestic labor, multiplied by the double/triple burden effect, have a predicted time saving which can be redirected to income-generating activities or relaxation time, contributing to enhanced conditions for gender equity. The project ICS help reduce cooking time by ~ 1 hour/household/day, thus providing women in project households with more time to invest in other productive economic development activities
VVB Assessment	The validation team confirmed the information from the document review, sectoral expertise, and site visit interviews. Conversations with female end users and grass root NGOs attested to the perceived impact of ICS on women, as the interviewees stated lack of free time as a factor hampering entrepreneurial ambitions in women and education in girls. The description in section 3.2 of the SD Vista PD /05/ is deemed appropriate and correct

Impact #3	Enhancing Job opportunity/Women Leadership
Type of Impact	Positive impact and increase employment opportunity are predicted with the project activity
Affected Stakeholder Group(s)	Local Citizens (Women's)
Resulting Change in Well-being	Help in economic growth through creating more job opportunities by implementing project activity. This project aims to employ 50% of women on the total jobs created due to the project activity, thus helps eradicating gender-based discrimination and provides socio-economic parity. In addition to this the project activity encourages participation of women in leadership / managerial role to an extent 50% thus helping the women empowerment
VVB Assessment	The validation team confirmed the information from the document review, sectoral expertise, and site visit interviews with stakeholders. Assessment of employee records, Up Energy Group's Policy and interview with current female employees confirms the current and further future employment creation for women. This confirms the expected impact of this project on the Affected Stakeholder Group(s). The description in section 3.2 of the SD Vista PD /05/ is thus deemed appropriate and correct.

Impact #4	Trainings imparted on climate change, project implementation and monitoring procedures
Type of Impact	Positive, Predicted, Indirect
Affected Stakeholder Group(s)	Implementing Partner Up Energy Staff
Resulting Change in Well-being	Training and skill development related to community engagement, survey implementation, technical trainings like conducting Water Boiling Tests (WBT) will be provided to many stakeholder groups which is envisaged to empower their lives by not only improving their employment chances but also through increased awareness levels regarding issues related to climate change, social equity. The project activity aims to conduct 5 trainings per year training and skill development program for youth population, thus increasing their employability

VVB Assessment	Training and skill development related to community engagement, survey conduction, technical trainings including those for conducting Water Boiling Tests (WBT) will be provided to many stakeholder groups which is envisaged to empower their lives by not only providing long-term employability but also through increased awareness levels regarding issues related to climate change, social equity. Interviews with current employees confirm that they have received adequate training. The description in section 3.2 of the SD Vista PD /05/ is deemed appropriate, correct, and feasible.

Impact #5	Using enabling access to clean technology
Type of Impact	Positive, Predicted, Indirect
Affected Stakeholder Group(s)	Project Beneficiaries and their families
Resulting Change in Well-being	Decreased reliance on fuel leads to resource conservation and promotes clean technology use. The project activity aims distribution of 500,000 energy efficient stoves which helps in clean access to beneficiary households
VVB Assessment	The validation team validated the information from the document review, sectoral expertise and site visit interviews with stakeholders and confirms the expected impact of this project on the Affected Stakeholder Group(s). It was observed during site visit inspections that all potential beneficiary households had traditional cookstoves and no access to clean technology mechanisms. The implementation of project activity is expected to reverse the same. The description in section 3.2 of the SD Vista PD /05/ is deemed appropriate and feasible.

3.1.3 Mitigation of Negative Impacts on Stakeholders

The Causal Chain Diagram in Section 2.1.9 of SD VISta PD identifies Negative Impact on livelihood of the local charcoal vendors as an unintended consequence of the Project Activity. The implementation of the project activity is expected to mitigate this by generating alternative job opportunities for the local population, including women and youth. Likewise, the training imparted to the local population would enhance skill development thus ensuring employability post project activity also.

The Causal Chain diagram identifies 4 impacts of the PA and clearly demonstrates the pathways leading to them, the impacts being:

1. Increase in use of energy efficient technology
2. Gender equality and empowerment of women and girls
3. Livelihood Generation
4. Reduction in fuel consumption

VVB, on basis of onsite interviews and assessment of employment records/33/, training manual and attendance/28,29/ concludes that PA has created jobs for women and youth thus mitigating the unintended negative impact.

Also, considering the significant demand-supply gap and the over reliance of Nigerian population on biomass fuel for cooking needs, decrease in the fuel demand in project location is not likely to have a significant negative impact on charcoal vendors.

3.1.4 Stakeholder Monitoring Plan

Section 3.3 stakeholder monitoring plan of SD VISta PD describes the identification of the monitored stakeholder groups, the types of measurements, the sampling methods and the frequency of monitoring and reporting. PP will collect data through interviews, surveys, direct observations, group discussions with stakeholders as well as from their financial, health and employment records. PP has visited the intended beneficiaries to carry out identification, sensitization, distribution and further follow up.

The Stakeholder monitoring plan takes into account all stakeholder groups. the impacts expected from the project on them, monitoring indicator, approach, and frequency as well as the procedure for calculating the same. The validation team confirms that the monitoring plan is comprehensive and all subsuming.

The monitoring plan has been summarized and tabulated below for further demonstration of thoroughness.

S. No.	Stakeholder Group Impacted	Impact	SDG Target	Monitoring Indicator	Monitoring Approach	Procedure for Calculation	Monitoring frequency
1	Beneficiary Household	Increase in average household savings, hence reduced poverty	***1.1*** By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day	Average savings realized due to decrease in expenditure on basic service such as cooking	Ex Post Monitoring Survey Q 5.1 "Do you save money using the project stove compared to the baseline usage?" and to calculate the monetary saving due to reduced fuel consumption through $B_{y,savings,i,j}$ SAMPLING: Stratified Random sampling with 95 per cent confidence interval and a 10 per cent margin of error achieved for monitored parameter	Quantity of woody biomass that is saved in tonnes per cookstove device per year divided by the conversion factor for fuelwood to charcoal (1:6) multiplied by the average cost of fuel used for cooking in project area. Average household savings = (By,savings,i,j /6/365) x Cost of Fuel By,savings - Quantity of woody biomass that is saved in tonnes per cookstove device per year Cost of Fuel - average cost of fuel used for cooking in project area	Annually
2	Beneficiary Household	Access to basic services	***1.4*** By 2030, ensure that all men and women, in particular the poor and the	Number of households having access to improved cooking	Ex post Monitoring Survey Q 4.1 Are you currently using the project stove?"	Number of beneficiary Households = Cumulative ICS distribution x Proportion of	Biennial

			vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	technology due to project activity	SAMPLING: Stratified Random sampling with 95 per cent confidence interval and a 10 per cent margin of error achieved for proportion of operational stoves (Upy)	operational stoves (Upy)	
3	Women	Women Empowerment by creation of employment to women population	***5.1*** End all forms of discrimination against all women and girls everywhere.	Proportion of women employees in the project activity	Employee list with Name & Gender obtained from HR Department SAMPLING: N/A	% of Women employees = No of Women Employees / Total Employees Strength	Annually
		Reduced drudgery	***5.4*** Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate	Average time saving associated with cooking time	**Baseline Survey** How many hours do you cook in average per day? **Ex post Monitoring Survey** Q 4.5 How many hours did you spend on cooking per day? Q 5.7 Do you see a reduction in time taken for cooking and fuel purchase? SAMPLING: Stratified Random sampling with 95 per cent confidence interval and a 10 per cent margin of error achieved for proportion of operational stoves (Upy)	Average time saving associated with cooking = Cooking time spent by HOUSEHOLD in (Baseline Scenario - Project Scenario)	Biennial
4	Women	Women Empowerment	***5.5*** Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life	Number of women serving in managerial/ leadership /ownership role	Employee list with Name & Gender obtained from HR Department Sampling Not Applicable	% of Women employees in managerial / leadership role = No of Women managers / Total strength of managerial positions	Annually
5	Beneficiary Household	Access to cleaner energy technologies	***7.1*** By 2030, ensure universal access to affordable,	Number of households having access to improved	Ex post Monitoring Survey Q 4.1 Are you currently using the project stove?	Number of beneficiary Households = Cumulative ICS distribution x Proportion of	Biennial

			reliable and modern energy services	cooking technology due to project activity	Sampling Stratified Random sampling with 95 per cent confidence interval and a 10 per cent margin of error achieved for monitored parameter	operational stoves (Upy)	
6	Project Staff, Implementation Partners and Survey Agencies	Training and skill development program for youth population, thus increasing their employability	***8.b.1*** By 2020, develop and operationalize a global strategy for youth employment and implement the Global Jobs Pact	Number of Trainings conducted in a year	Training records maintained by the project team Sampling Not Applicable	Number of trainings conducted in the monitoring period	Annual
7	Professional, Graduates, Implementation Partners and Survey Agencies	The project activity generates employment for marketing / sales and distribution / technical employees	***8.5*** By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.	Number of jobs created	Employee list with Name & Gender obtained from HR Department Sampling Not Applicable	Number of jobs created in the monitoring period	Annual

3.1.5 Net Positive Stakeholder Wellbeing Impacts

SD VISta PD section 3.4 describes net positive impact on different stakeholders separately.

Category	**Indicator**	**Parameter**	**Impact**	**Estimated Quantitative Impact** (As per SDG Impact Tool – Ex Ante)	**VVB Assessment**
Social Development	Quality of employment	Proving employment to both men and women	Positive	An estimated 150 new jobs will be created of which 50 % employees and 50% of those in leadership position will be woman. Additionally, 5 training sessions are to be	Validation team post desk review, on site observations and conversations with various stakeholders including intended beneficiaries, local l community leaders, grass root NGOs and government officials, concludes that there is absence of regularized employment opportunities for the people, especially youth and women. The introduction of ICS has already created job opportunities (as validated

Category	Indicator	Parameter	Impact	Estimated Quantitative Impact (As per SDG Impact Tool – Ex Ante)	VVB Assessment
				conducted every year for employees which improves their employability skills.	from employment records/33/) and will create more in future. Interview with stakeholders also revealed how lack of free time hampered entrepreneurial ambitions and educational progress for women and girls respectively, since they are primarily involved in cooking, and the time saved there can be invested in other pursuits. On site observations revealed that households in the intended project activity region use traditional cookstoves and none of them have access to clean technology mechanisms. Hence distribution of ICS will ensure that the households have access to affordable clean technology.
	Livelihood of poor	Savings in time and money for cooking and boiling improves quality of life and opportunity for jobs in saved time	Positive	It is estimated that 1hr/day/HOUSEHOLD would be saved.	
	Access to clean technologies	Product is affordable and clean	Positive	It is estimated that 3,46,786 households will be benefitted from distribution of ICS per year.	
	Human and institutional capacity	N/A	0	N/A	
Economic and technical development	Quantitative employment and income generation	Provide employment opportunities	Positive	150 new jobs are estimated to be created, of which 50% will be women.	On-site assessment confirmed the dearth of employment opportunities in the region of project activity. Thus, the introduction of ICS will have a quantifiable impact on job creation. Since the project activity intends to distribute ICS to households using traditional cookstoves, there will be a cent percent increase in
	Technology transfer and new technolog	New technology introduced	Positive	It is estimated that ICS would be	

Category	Indicator	Parameter	Impact	Estimated Quantitative Impact (As per SDG Impact Tool – Ex Ante)	VVB Assessment
	ical self-reliance			distributed to a total of 3,46,786 households per year.	technology transfer in the region. Further, the PP intends to impart training to the beneficiary household regarding stove usage and maintenance therefore ensuring self-reliance.

The site visit observations and interviews along with desk review demonstrates that the project has had a positive impact on stakeholders. The validation team assessed the information and concluded that the justification described in the section is correct and appropriate net impact of project on the stakeholder's is positive.

4 BENEFITS FOR THE PLANET

4.1.1 Condition of Natural Capital and Ecosystem Services at Project Start

Section 4.1 of the SD VISta PD/05/ states about condition of natural capital and ecosystem services at project start which has been validated by audit team by assessing UN (FAO)/45/ report and scientific writings/46. a/ available online /5/ confirms the of the appropriateness of the description in the SD VISta PD. The description of the conditions prior to the project starts and the threats faced by the ecosystems were confirmed during on-site inspection by validation team through interviews with local stakeholders. /11/. Telephonic conversation with Community leaders of the local Karu community and MD of grassroot NGO-WISE also confirmed the same. /11/

It is to be noted that the baseline has been assessed at the national level since the project boundary is the entire country of Nigeria i.e. within the boundary of Nigeria having the geographical coordinates 9°4'55.2 latitude and 8°40.517 longitude.

VVB has confirmed the intended national implementation of PA via the Baseline Survey Report Conducted by PP along with ICEED /16/ which documents that baseline survey was conducted across all the key geographical areas of Nigeria, i.e., Northern Region, Southwest Region and Southeast Region, emphasising on the intended pan Nigeria impact of the PA.

Hence, the VVB deems a national level assessment of baseline condition appropriate.

The validation team concluded that information provided in PD is accurate about conditions at the project start date with respect to natural capital and ecosystem services.

4.1.2 Expected Impacts on Natural Capital and Ecosystem Services

Impact #1	Reduced demand for non-renewable biomass based charcoal in the project area due to implementation of more efficient cookstoves
Type of Impact	Positive, Predicted and Direct
Affected Stakeholder Group(s)	Biodiversity, species richness, soil conservation, water conservation, wildlife conservation
Resulting Change in Well-being	Reduction in the household demand of charcoal which in turn reduces demand for woody biomass in the project area will enable slow deforestation rate which further will aid the various ecosystem services conservation. The project activity will reduce 2.57 Tonnes of equivalent firewood/annum/household, which aggregates to 6,202,768 tonnes of Non-renewable biomass over a 7-year period in participant households and will contribute towards reducing deforestation

VVB Assessment	VVB assessment team reviewed the VCS Draft Joint Validation and Verification Report/43/, Ex Ante ER Sheet-VCS /6/, SDG Calculation tool- Ex Ante/10/, fnRB Report and calculation sheet/44/, WBT test results /45/ and found the claims in SD VISta PD /05/ to be in line with them. The introduction of the ICS impacts the pattern of consumption of biomass for cooking purposes; by reducing the amount of non-renewable fuel required, the resulting drop in demand slows deforestation, thus increasing the above-ground biomass in the adjoining forests near the project area. Further assessment of peer reviewed (Elseiver Toxicology reports, USDA – Moscow Forestry Science Laboratory results) scientific papers /46/ substantiates direct correlation between reduced deforestation and improved river health and soil heath. Reduction in total fuel consumption per year would be directly proportional to reduced deforestation which in turn would ensure improved water quality of rivers and that of topsoil. Thus, the description in section 4.2 of the SD Vista PD /05/ is deemed appropriate.

Impact #2	Avoided emission of GHGs made possible through the use of SmartHome Pro
Type of Impact	Positive and Direct
Affected Stakeholder Group(s)	Biodiversity and Species Richness, Soil and Water Conservation
Resulting Change in Well-being	Reduced deforestation activities will lead to slow annual net change in the forest area and also possibly lead to increase in the forest area. 11,436,117 tCO_2e of greenhouse gas emissions will be avoided or removed over a 7-year period
VVB Assessment	VVB assessment team reviewed the VCS Draft Joint Validation and Verification Report/42/, Ex Ante ER Sheet-VCS /6/, SDG Calculation tool- Ex Ante/10/, and confirmed that the project activity is avoiding GHG emissions, made possible by use of ICS. Assessment of peer reviewed scientific papers (Elsiever-Environmental Pollution) confirms direct correlation between improved biomass cookstove intervention and improved air quality which in turn has positive impact on biodiversity and specie richness. The description in section 4.2 of the SD Vista PD /01/ is deemed appropriate.

4.1.3 Mitigation of Negative Impacts on Natural Capital and Ecosystem Services

To assess the measures needed and designed to mitigate any negative impacts on natural capital and ecosystem service validation team assessed the PD, supportive documents, interviewed the stakeholders, including PP, end users, local community leaders and NGOs, and concluded that no negative impacts have been identified on natural capital and ecosystem services on implementation of project activities.

ESPL assessment team concluded that no negative impacts on natural capital and ecosystem services are ascertained to arise from project activity hence need for mitigation of same wouldn't arise.

4.1.4 Natural Capital and Ecosystem Services Monitoring Plan

The PP has designed a monitoring plan to track the effects of the project activities on the natural capital and ecosystem services, which is described in SD VISta PD section 4.3. The monitoring plan is structured according to the project activities and allows us to track the contributions on the SDG, described in section 1 of the SD-VISta PD, and to support all impacts and claims. All variables are directly linked to the impacts on the planet expected by the project.

All necessary parameters required to support all impacts and claims described in the project's expected and net impacts are contained in the monitoring plan and are clearly described. The desk review and on-site visit interview with PP confirms that monitoring arrangements described in the monitoring plan are feasible within the project design and that the PP will be able to implement the monitoring plan. The Natural Capital Impacted, The impact itself, monitoring indicator, frequency, approach and the procedure for calculation is summarized and tabulated below.

S.No.	Natural Capital Impacted	Impact	SDG Target	Monitoring Indicator	Monitoring Approach	Procedure for Calculation	Monitoring frequency
1	Forest Ecosystem adjoining project implementation area	Reduced demand for non-renewable biomass based charcoal firewood in the project area due to implementation of more efficient cookstove	***12.2*** By 2030, achieve the sustainable management and efficient use of natural resources	Decrease in specific fuel consumption	Ex Post Monitoring Survey Q 5.1 Do you see reduction in fuel consumed on project stove when compared to that traditional stove? SAMPLING This parameter will be monitored under VCS program for the said project with only the results obtained during corresponding SD VISta MP being considered in estimations. No separate sampling or monitoring will be undertaken under SD VISta program	Based on VMR 0006 meth version 1.1 Eq 3 & 6 By,savings,i,j = Bold,adjusted x (1 - ηold / ηnew,I,j) $Bold, adjusted = Bold \times (1 - \mu_y)$ B_{old} = Annual quantity of woody biomass that would have been used in the absence of the project activity (in tonnes per device) to generate useful thermal energy equivalent to that provided by the improved cook stove Bold = Adjusted $B.4$/ to account the ex post usage of firewood in baseline cookstove(s) by project households in addition to improved cookstove (in tonnes per device) ηold = Efficiency of baseline cookstove $\eta new,i,y$ = Efficiency of the improved cook stove type i and batch j determined through water boiling test (WBT)	Annual
2	Atmosphere	Reduced levels of emissions and household air pollution	***13.2*** Integrate climate change measures into national policies, strategies	Amount of GHG emissions avoided or removed	N/A SAMPLING This parameter will be monitored under VCS program for the said project with only the	Based on VMR 0006 meth version 1.1 Eq 2 $ER_{y,I,j} = B_{y,savings,I,j} \times f_{NRB,y} \times NCV_{wood\ fuel} \times (EF_{wf,co2} + EF_{wf,non\ CO2}) \times N_{y,I,j} \times 0.95$	Annual

			and planning		results obtained during corresponding SD VISta MP being considered in estimations. No separate sampling or monitoring will be undertaken under SD VISta program		
3	Forest Ecosystem adjoining project implementation area	Increase in Above Ground Biomass	***15.1*** By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	Amount of Non-renewable biomass saved	Ex Post Monitoring Survey Q 5.1 Do you see reduction in fuel consumed on project stove when compared to that traditional stove? SAMPLING This parameter will be monitored under VCS program for the said project with only the results obtained during corresponding SD VISta MP being considered in estimations. No separate sampling or monitoring will be undertaken under SD VISta program	By,savings,i,j x Ny,I,j By,savings,i,j - Quantity of woody biomass that is saved in tonnes per cookstove device of type I and batch j during year y Ny,I,j - number of operational cookstoves in the monitoring period	Annual

4.1.5 Net Positive Natural Capital and Ecosystem Services Impacts

It has been validated from Ex-ante ER sheet_2673/13/ and SDG Impact Tool Ex Ante /10/ that generate an estimated 11,436,117 tCO_2e emission reductions over the 7 years project crediting period. A total 5,00,000 ICS will be distributed in the country within Nigeria as per the Ex-ante estimate as per the project design.

The year wise estimated GHG Reduction has been given below:

Year	Estimated GHG emission reductions or removals (tCO_2e)
2022-2023	346,553
2023-2024	1,114,977
2024-2025	2,150,419
2025-2026	2,071,765
2026-2027	1,994,007
2027-2028	1,917,159
2028-2029	1,841,236
Total estimated ERs	**11,436,117**
Total number of crediting years	**7**
Average annual ERs	**1,633,731**

No negative ecological impacts have been identified to be arising from the project, during assessment. VVB therefore concludes that the net impact of the project activity on natural capital is positive.

Category	Indicator	Parameter	Impact	VVB Assessment
Environment	Water Quality	Reduction in cutting trees due to charcoal savings from usage of ICS. Hence less charcoal dust to pollute rivers	Positive	VVB assessment team via desk review and sectoral scope expertise ascertained the positive impact of project activity on water quality, soil condition and air quality. The assessment team referred to published literature available in the public domain to draw conclusions. These included scientific papers published in Elseiver's journals, 'Toxicology Reports' (on Effects of coal microparticles on marine organisms) and 'Environmental Pollution' (on improved biomass cookstove interventions' effects on improved indoor air quality and blood pressure)USDA report on The Effects of Forest Management on Erosion and Soil Productivity/46/.
	Soil Condition	Less soil erosion due to reduction in cutting trees for charcoal production through usage of project ICS	Positive	
	Air Quality	Less smoke will be produced due to effective burning of fuel with the project ICS	Positive	

5 OPTIONAL: CLIMATE MODULE

Not applicable since the project does not describe Climate Module which is an optional requirement.

5.1 Baseline Scenario for GHG Sinks and Sources

N/A

5.2 Monitoring

N/A

6 OPTIONAL: SD VISTA ASSETS

Not Applicable since project activity does not generate any SD VISta Assets.

6.1 SD VISta Asset

N/A

6.2 Assets from Other Programs

N/A

7 VALIDATION CONCLUSION

The Project Participant, *UpEnergy Group*, has commissioned the VVB, Carbon *Earthood Services Private Limited* to perform an independent validation of the VCS Project Activity "UpEnergy- Social and Climate Impact Programme-Nigeria-1". This report summarizes the findings of the validation of the project, performed based on SD VISta criteria, as well as criteria given to provide for consistent project operations, monitoring, and reporting.

The validation process was performed based on all guidance and criteria as provided in SD VISta Standard /01/ and SD VISta Program Guide /02/

The review of the Project Description: SD VISta, the project, supporting documents, on-site inspection, and subsequent follow-up actions (independent research of information) has provided Earthood with sufficient evidence to determine the fulfilment of stated criteria. ;

ESPL validation approach is based on the understanding of the risks associated with reporting of GHG emission data and the controls in place to mitigate these. ESPL planned and performed the validation by obtaining evidence and other information and explanations that ESPL considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

The proposed project aims to improve household and community access to improved cookstoves by distributing high thermal efficiency, low greenhouse gas emission cooking stoves known as Improved Cook Stoves (ICS) to households of Nigeria. The project is aiming to contribute towards 07 SDGs out of 17 SDGs. This validation was carried out using a risk-based approach. 01 Corrective Action Request (CAR), 09 Clarification Requests (CL) and no Forward Action Requests (FAR) were raised and successfully closed during the validation.

VVB confirms that the project complies with the validation criteria for project set out in the Sustainable Development Verified Impact Standard and the SD VISta Program Guide /02/, including a reasonable level of assurance for the validation.

As a result, the assessment team of ESPL confirms that:

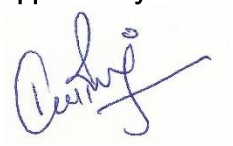
- The project fulfils criteria of SD VISta Standard /01/.
- The project is in line with all relevant SD VISta requirements /B01,02/.
- The project SDGs are sufficiently justified in the SD VISta PD /04/.

The assessment by ESPL also validates the estimated value of SDG impacts as stated:

SDG	Estimated / Ex Ante Impact (per annum)
SDG 1.1($/day/HOUSEHOLD)	0.22
SDG 1.4 (No. of HOUSEHOLD)	3,46,786
SDG 5.1(% female employees)	50%
SDG 5.4 (hr/day/HOUSEHOLD)	1
SDG 5.5 (Proportion of women serving in managerial roles)	50%
SDG 7.1 (No. of HOUSEHOLD)	3,46,786

SDG	Estimated / Ex Ante Impact (per annum)
SDG 8.b.1 (No. of trainings/year)	5
SDG 8.5 (No. of jobs created)	150
SDG 12.2 (tonnes of eq. firewood/annum/HOUSEHOLD)	2.57
SDG 13 (tCO_2e of GHG emissions avoided per annum)	16,33,731
SDG 15.1 (By,savings,i,j x Ny,I,j) (tonnes of eq. firewood/annum)	8,86,110

Approved by



Dr. Kaviraj Singh

Managing Director
Earthood Services Privated Limited

Date: 21-08-2024
Place: Gurugram, Haryana

APPENDIX 1: COMPETENCE STATEMENT

Competence Statement			
Name	Kaviraj Singh		
Education	Ph.D. (Environmental Engineering), IIT Delhi Masters (Energy & Environmental), DAVV Indore		
Experience	15 Years +		
Field	Climate Change & Environment		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS-I.D., AMS-II.D., ACM0006, AMS-I.A., AMS-I.C., AMS-II.B., AMS-III.H, ACM0002, ACM0001, AM0080, ACM0018, AM0056, AM0073 VM0042, AMS-III.G, AMS-III.AF., VM0032, VM0018, ACM0010, ACM0022, AMS-III.D, AMS-III.F and AMS-III.A.Q		
Local expert	YES (India)		
Financial Expert	YES		
Technical Reviewer	YES		
TA Expert (X.X)	YES (TA 1.1, TA 1.2, TA 3.1, TA 13.1, TA 13.2)		
Reviewed by	Shifali Guleria (Quality Manager)	**Date**	02/02/2023
Approved by	Deepika Mahala (Technical Manager)	**Date**	02/02/2023

Competence Statement			
Name	Anjali Chaudhary		
Education	Bachelor of technology in Civil Engineering		
Experience	8 months		
Field	Civil Engineering		
Approved Roles			
Team Leader	Yes (VM)		
Validator	Yes		
Verifier	Yes		
Local expert	Yes (India)		
Financial Expert	No		
Technical Reviewer	No		
TA Expert (X.X)	Yes (VM TA 3.1)		
Reviewed by	Shifali Guleria (Quality Manager)	**Date**	19/06/2023
Approved by	Deepika Mahala (Technical Manager)	**Date**	19/06/2023

Competence Statement			
Name	Deepika Mahala		
Country	India		
Education	M. Sc. (Environment Management), GGSIP University B.Sc. Hons. (Chemistry), Sri Venkateshwar College, DU		
Experience	6 Years +		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	ACM0002, AMS.I.D., AMS.I.A, AMS.III.AV, AMS.II.G, AMS-II.C		
Local expert	YES (India, Bangladesh)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.2 & TA 3.1)		
Other roles	YES (SDVISta 14)		
Reviewed by	Shifali Guleria (QM)	**Date**	28/04/2022
Approved by	Kaviraj Singh (MD)	**Date**	28/04/2022

Competence Statement			
Name	Akanksha Sengupta		
Education	M.Sc Environmental Studies, University of Delhi B.Sc Zoology, Hans Raj College, DU		
Experience	4 months		
Field	Environment Science and Policy		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	NO		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	NO		
Trainee	YES		
Reviewed by	Shifali Guleria (Quality Manager)	**Date**	19/05/2023
Approved by	Deepika Mahala (Technical Manager)	**Date**	19/05/2023

Competence Statement	
Name	Shifali Guleria

Education	M.Sc. (Environmental Studies and Resource Management), TERI University		
Experience	3+ year		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	YES (AMS-I.A., AMS-II.G., AMS-II.E., AMS-III.A.V., AMS-I.D, ACM0002)		
Local expert	YES		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (1.2, 3.1)		
Reviewed by	Deepika Mahala	**Date**	18/02/2022
Approved by	Ashok Gautam	**Date**	18/02/2022

Competence Statement			
Name	Kumden Nanbal Luka		
Country	Nigeria		
Education	B.tech. in Urban and Regional Planning		
Experience	1+ years		
Field	Environment; Urban-Rural planning		
Approved Roles			
Team Leader	No		
Validator	No		
Verifier	No		
Methodology Expert	No		
Local expert	Yes (Nigeria)		
Financial Expert	No		
Technical Reviewer	No		
TA Expert	No		
Reviewed by	Shreya Garg	**Date**	23/11/2018
Approved by	Anshika Gupta	**Date**	23/11/2018

Competence Statement	
Name	Parul Srivastava

Education	PhD Forest Ecology and Environment M.Sc. Botany B.Sc. Botany and Chemistry		
Experience	20 years		
Field	Forestry		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	NO		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (14.1)	YES		
Other roles	Yes (SDVISta SS 1)		
Reviewed by	Shifali Guleria (Quality Manager)	**Date**	13/04/2023
Approved by	Deepika Mahala (Technical Manager)	**Date**	13/04/2023

Name	Sumit Kaushik		
Country	India		
Education	Ph.D. (Social Entrepreneurship) research (Ongoing) Ph.D. (Business Administration) MBA (Communication Management) BA (Journalism and Mass Communication)		
Experience	10 Years +		
Field	Public Policy and Communication		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	NO		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert	NO		
Other roles	YES (SDVISta 10)		
Reviewed by	Shifali Guleria (QM)	**Date**	01/08/2023
Approved by	Deepika Mahala (TM)	**Date**	01/08/2023

Competence Statement			
Name	Ranjan Singh		
Education	BSc (Physics), MBA (Marketing)		
Experience	13 Years		
Field	Power, Utilities and Renewables		
Approved Roles			
Team Leader	YES (VM only)		
Validator	YES		
Verifier	YES		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	YES (TA 1.2)		
Other roles	Yes (SDVISta SS 2, 4)		
Reviewed by	Shifali Guleria (Quality Manager)	**Date**	29/06/2023
Approved by	Deepika Mahala (Technical Manager)	**Date**	29/06/2023

Competence Statement			
Name	Sukanya Phukan		
Education	M.Sc (Environmental Science and Technology) B.Sc (Zoology)		
Experience	1+ year		
Field	Environment Science		
Approved Roles			
Team Leader	YES (VM only)		
Validator	YES (VM only)		
Verifier	YES (VM only)		
Local expert	NO		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	YES (VM TA 1.2, 3.1)		
Other Roles	YES (SD VISta Expert SDG 13)		
Reviewed by	Shifali Guleria (Quality Manager)	**Date**	23/06/2023
Approved by	Deepika Mahala (Technical Manager)	**Date**	23/06/2023

APPENDIX II: ABBREVIATIONS

Abbreviations	Full texts
AFOLU	Agriculture, Forestry and Other Land Use
BE	Baseline Emission
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CL	Clarification Action
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DOE	Designated Operational Entity
DVR	Draft Validation Report
EB	CDM Executive Board
EF	Emission Factor
EIA	Environmental Impact Assessment
ER	Emission Reduction
ESPL	Earthood Services Private Limited
FAO	Food and Agriculture Organization
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GP	Grouped Project
ICS	Improved Cook Stoves
ILO	International Labour Organization
IPCCC	Intergovernmental Panel on Climate Change
MP	Monitoring Plan
MR	Monitoring Report
NA	Not Applicable
PA	Project Activity
PD	Project Description
PE	Project Emission
PP	Project Participant
QA/QC	Quality Assurance / Quality Control
QMS	Quality Management System
SD VISTA	Sustainable Development Verified Impact Standard
SDG	Sustainable Development Goals
TR	Technical Review
TSF	Three-stone fire stove
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard
VCS-PD	VCS – Project Description
VCU	Verified Carbon Unit
VVB	Validation/verification Body
XLS	Emission Reduction Calculation Spread Sheet

APPENDIX III: REFERENCES

S.No.	Title of Document	Version	Provided By
1. 1	SD VISta Standard (dated 22 January 2019)	*Ver 1.0*	*VCS*

2.	2.1 SD VISta Programme Guide (dated 22 January 2019) 2.2 SD VISta Programme Definition (dated 22 January 2019)	*Ver 1.0* *Ver 1.0*	*VCS*
3.	VCS Standard	*Ver 4.4*	*VCS*
4.	SD VISta Project-Description-Template	*Ver 1.0*	*VCS*
5.	SD VISta PD	*Ver 1.6*	*PP*
6.	Ex Ante ER Sheet- VCS	-	*PP*
7.	On Site Audit Records	-	*VVB*
8.	VMR0006 Methodology for Installation of High Efficiency Firewood Cookstoves	*1.1*	*VCS*
9.	ESPL contract with PP	-	*VVB*
10.	SDG Calculation Tool – Ex Ante	*Ver 1.1*	*PP*
11.	Interview Records	-	*VVB*
12.	CDM Guidelines Sampling and surveys of CDM project activities and programmes of activities Sampling and surveys for CDM project activities and programmes of activities	*Ver 4.0* *Ver 9.0*	*CDM*
13.	Project Registry Webpage (Last accessed: 25/10/2023) *https://registry.verra.org/app/projectDetail/VCS/2673*	-	*VCS*
14.	Receipt of sale of first stove unit- UID:VSP00045	*07/05/2022*	*PP*
15.	Stakeholder Consultation Report		
16.	Baseline assessment report conducted by UpEnergy and International Centre for Energy, Environment and Development (ICEED) Baseline Survey database	*Jan,2022*	*PP*
17.	Simple Payback Calculation	*Ver1.0*	*PP*
18.	End User Agreement and Warranty Card	-	*PP*
19.	Share Certificate- Climate Catalyst Nigeria Ltd.	-	*PP*

20.	Distribution Database and ICS sale receipts	-	*PP*
21.	Google Earth Software Location of PA (Last accessed 25/10/2023) https://earth.google.com/web/search/9.4552,+8.40517	-	*Others*
22.	https://ead.gov.ng/environmental-guidelines-revision/	-	*Others*
23.	*Nigerian Alliance for Clean Cookstove Report* https://naccnigeria.org/son-approves-national-standards-for-biomass-cookstoves-in-nigeria	-	*Others*
24.	UpEnergy Group Policy	*2023*	*PP*
25.	Up Energy Disciplinary Code	*Jan,2022*	*PP*
26.	UPE Staff Handbook	*Oct,2022*	*PP*
27.	UPE Health and Safety Policy	*2023*	*PP*
28.	Training Material- PPT	07/05/2022 – 31/10/2022	*PP*
29.	Training Attendance and Schedule	07/05/2022 – 31/10/2022	*PP*
30.	LSC Records (Minutes of the meeting, Attendance, Photos, Videos, evaluation forms)	*23/06/2022*	*PP*
31.	Grievance Redressal Records	07/05/2022 – 31/10/2022	*PP*
32.	Employee Records	07/05/2022 – 31/10/2022	*PP*
33.	Terms and Conditions of Core Labour Conventions of the International Labour Organization (ILO) https://libguides.ilo.org/c.php?g=658372&p=4651885	-	*Others*

34.	Obisi, Chris (2005): Substance of Employee, Industrial and Labour Relations, Lagos, Megavons (West Africa) Limited Oginni, B. 'Yemi and Adesanya, A 'Segun The Workers' Rights In Nigeria: Myth Or Reality? (2013)	- -	*Others*
35.	*Constitution of Federal Government of Nigeria* https://constitutionnet.org/sites/default/files/nig_const_79.pdf	*1979*	*Others*
36.	National Policy on Occupational Safety and Health, Federal Government of Nigeria		*Others*
37.	UPE Flyers with customer care contact details	-	*Others*
38.	UPE HR Policy		*PP*
39.	KPT Test records	*04/02/2022 to 07/02/2022*	*PP*
40.	*National Bureau of Nigeria Report on Poverty* https://nigerianstat.gov.ng/news/78#:~:text=Highlights%20of%20the%202022%20Multidimensional,quarter%20of%20all%20possible%20deprivations.	-	*Others*
41.	Screenshot of Random sample generator	-	*PP*
42.	VCS Joint Validation and Verification Draft Report	-	*VVB*
43.	FnRB records and calculation sheets	-	*PP*
44.	WBT Test results	*25/11/2022 to 12/01/2023*	*PP*
45.	*Global Forest Resources Assessment Report (FAO)* *Global Forest Resources Assessment (FRA) 2020 Nigeria - Report (fao.org)*	*2020*	*Others*
46.	a. *MONGABAY REPORT ON STATUS OF DEFORESTATION IN NIGERIA-* https://rainforests.mongabay.com/deforestation/2000/Nigeria.htm (last accessed on 25/10/2023)	-	*Others*

	b. DO IMPROVED BIOMASS COOKSTOVE INTERVENTIONS IMPROVE INDOOR AIR QUALITY AND BLOOD PRESSURE? A SYSTEMATIC REVIEW AND META-ANALYSIS- https://www.sciencedirect.com/science/article/pii/S0269749121015797 (Last accessed on 25/10/2023) c. *THE EFFECTS OF FOREST MANAGEMENT ON EROSION AND SOIL PRODUCTIVITY- https://forest.moscowfsl.wsu.edu/smp/docs/docs/Elliot_1-57444-100-0.html* (Last accessed on 25/10/2023) d. NCBI REPORT CORRELATING ICS AND HEALTH- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8220176/ (Last accessed on 26-10-2023)		
47.	Nyarko, I.; Nwaogu, C.; Miroslav, H.; Peseu, P.O. Socio-Economic Analysis of Wood Charcoal Production as a Significant Output of Forest Bioeconomy in Africa. Forests **2021**, 12, 568. https://doi.org/10.3390/f12050568	*2021*	*Others*
48.	Manufacturers and Technical Specifications of ICS-SmartPro Home		*PP*
49.	https://www.upenergygroup.com/projects (last accessed 25/10/2023)	-	*PP*
50.	https://www.upenergygroup.com/technology (last accessed 25/10/2023)	-	*PP*
51.	*NEWS REPORT ON PRICES OF CHARCOAL IN NIGERIA* https://www.betaprices.com/charcoal-for-sale-in-nigeria	-	*Others*
52.	WORLD BANK REPORT - https://documents1.worldbank.org/curated/en/164241468178757464/pdf/98664-REVISED-WP-	-	*Others*

	P146621-PUBLIC-Box393185B.pdf(last accessed on 05/05/2023)		
53.	GLOBAL FOREST WATCH REPORT- https://gfw.global/42mhFpm(last accessed on 05/05/2023)	-	*Others*
54.	Blind Assessment and Consultation Feedback Form		

APPENDIX IV: FINDINGS

Table 1. CL from this validation

CL ID	01	**Section no.**	SDG Impact tool	**Date :** 27/06/2023
Description of CL				
The contribution of project activity towards SDG 1.1 has been quantified as a saving of 0.25$/day/HOUSEHOLD based on the amount of fuel saved multiplied by the cost of charcoal. PP shall address the following observations: 1. This calculation does not account for the cost of cookstove borne by the households as one time investment. PP shall clarify how does this value accounts for net savings by the HOUSEHOLDs. 2. The source for charcoal price tracker in Nigeria (https://www.betaprices.com/charcoal-for-sale-in-nigeria) gives a range of price varying between 170 to 600 USD, PP shall demonstrate how the cost of charcoal is determined as 216.45 USD/ton. 3. SDG 1.1 targets population living in extreme poverty under $1.25 a day, it is not clear how does the project activity have any direct impact on the international poverty line given that the project description document does not consist of any information on baseline economic condition of beneficiary households. PP shall justify and provide supportive.				
Project participant response				**Date :** 28/07/2023

1. PP duly confirms the projected saving value 0.25$/day/HOUSEHOLD is purely based on the operational cost i.e., reduction in fuel expenditure achieved in project scenario and no capital cost component is considered for both baseline and project scenario. Also, the one-time cost borne by the HOUSEHOLD for procurement of new stove will be paid back in < 1 month from the date of ICS purchase, hence one time investment is not taken into consideration for saving calculation and this applies for the baseline stoves as well 2. PP has considered an average cost of Restaurant grade hardwood and softwood charcoal (Naira 100,000 / tonne), since it is being used for cooking purposes by most of the local population. While converting it to US currency, PP has used a currency equivalent of 0.0021645 (Naira/USD) considering the forex rate during the time of assessment. It is also to be noted that there is an historical drop of Nigerian currency in the last month[2] The recent study conducted by National Bureau of Statistics, Federal Government of Nigeria[3] has revealed around 63% of persons living within Nigeria (133 million people) are multidimensionally poor. The National MPI is 0.257, indicating that poor people in Nigeria experience just over one-quarter of all possible deprivations. The study has also revealed that over half of the population of Nigeria are multidimensionally poor and cook with dung, wood or charcoal, rather than cleaner energy. High deprivations are also apparent nationally in sanitation, time to healthcare, food insecurity, and housing. It is evident from the study that the population using the charcoal or firewood fuels are poor in economic status, hence the savings realized through the project i.e., would certainly help in alleviation of poverty. PP has used the SDG 1.1 for this impact since it is well in line with the spirit of SDG 1.1. PP has also included findings of the study conducted by National Bureau of Statistics, Federal Government of Nigeria in the revised SD Vista PD
Documentation provided by project participant
1. Revised SD Vista PD v1.1
VVB assessment **Date:** 02/08/2023
1. PP is requested to supplement evidence/calculations used to determine time required by end users to break even (i.e., <1 month, as quoted by PP above.). PP is requested to also demonstrate the savings associated with the project activity, if both operational and capital costs are considered for baseline and project scenario. OPEN 2. Independent assessment by the VVB regarding Socio-Economic Analysis of Wood Charcoal in Africa[a], with emphasis on Nigeria revealed that, with increasing population and changing forest cover characteristics, the share of hardwood and softwood charcoal in market has also modified. Current estimates showcase that around 85% of charcoal produced in Africa is of the softwood variety. Nigeria being one of the largest producers of charcoal worldwide, complies with these figures. PP is requested to further justify the rationale for considering average of hardwood and softwood charcoal for calculating costs, given no question on charcoal quality can be found in Baseline Survey. OPEN 3. PP has provided credible evidence (including findings of the study conducted by National Bureau of Statistics, Federal Government of Nigeria) which sufficiently justify the impact of PA on SDG 1 targets. The same has also been incorporated in the revised SD Vista PD. This finding thus stands CLOSED
Project participant response **Date :** 18/08/2023
1. PP has enclosed a payback calculation sheet which encompasses the cost to benefit analysis for project ICS for VVB's reference. However, for quantification of SDG benefits PP has only considered the operational cost for both baseline & project scenario as the capital investment does not has a significant impact on the project lifecycle cost as can been seen in the Payback Calculation 2. PP has recalculated the cost of charcoal by taking weighted average cost of both hardwood and softwood in line with the research paper cited by the VVB. PP has updated the documents based on the revised charcoal prices
Documentation provided by project participant
1. Revised SD Vista PD v1.2 2. Revised SD Vista MR v1.2 3. SDG Calculation Tool Ex Ante v1.2 4. SDG Calculation MP 01 v1.2 5. Simple Payback Calculation - Project ICS
VVB assessment

[2] https://www.reuters.com/markets/currencies/nigeria-allows-naira-drop-more-than-36-official-market-2023-06-14/

[3] https://nigerianstat.gov.ng/news/78#:~:text=Highlights%20of%20the%202022%20Multidimensional,quarter%20of%20all%20possible%20deprivations.

The payback calculation sheet has been assessed to be in accordance with impact benefit claimed by PA. Cost of charcoal has been recalculated to take accordance of current market and consumerism trends. The cost of charcoal has been recalculated and likewise incorporated in the PDD. This approach is found to be appropriate and conservative in nature. The findings thus stand CLOSED.

CL ID	02	Section no.	SDG Impact tool	Date : 27/06/2023
Description of CL				
The contribution of project activity towards SDG 5.4 has been determined as 1 hr/day/HouseHold cooking time has been reduced and the source to determine the amount of time saved is referenced as the Monitoring Survey. However, in the Monitoring survey (column BG and BJ), Questions posed to the households have responses are in (binary Yes/No) terms: • 5.3 Do you see a reduction in time taken for cooking and fuel purchase? • 5.7 Do you see a reduction in time taken for cooking and fuel purchase? (repeated) PP shall clarify how 1 hour saving is determined without exact responses for the quantification from the households.				
Project participant response				**Date :** 28/07/2023
PP has calculated the amount of time saved as per the below equation, Average time saving = Cooking time spent by HOUSEHOLD in (Baseline Scenario – Project Scenario) The cooking time spent in the baseline scenario is established through the baseline study. (Please refer to Baseline Report Pg – 24) and based on the study results PP has calculated the weighted average of cooking time in the pre-project scenario in the document, VCS 2673 SD Vista - SDG Impact Tool-Ex Ante_v1.0.xlsx (refer to tab: SDG 5.4). The average cooking time spent by the HOUSEHOLD during the project scenario has been captured through the question 4.5 (column AV) from the monitoring survey results. The overall average cooking time in project scenario is calculated through column AV (value: 1.63). In order to reconfirm the time savings achieved in the project scenario PP has included an objective question 5.3 in the ex-post survey. PP also acknowledges question 5.7 were repeated in the monitoring survey report due to clerical error. The average time savings associated with cooking is calculated to be 0.82 hours/day/HOUSEHOLD for the Monitoring Period 1 and ex-ante value is anticipated to be 1 hours/day/HOUSEHOLD				
Documentation provided by project participant				
VVB assessment				**Date:** 02/08/2023
The average amount of time spent cooking in project scenarios (value:1.63) is confirmed from Column AV of Monitoring Survey which documents response to question 4.5 - How many hours you spent on cooking. This is further validated by question 5.3 (Do you see a reduction in time taken for cooking and fuel purchase?) of monitoring survey. The clerical error pertaining to question 5.3 has been taken note of. The Baseline Study revealed that the end-users were questioned about the time spent cooking on traditional stoves. The baseline parameter was calculated considering weighted average cooking time. This approach was found to be appropriate and conservative by VVB. The finding thus stands CLOSED.				

a: Nyarko, I.; Nwaogu, C.; Miroslav, H.; Peseu, P.O. Socio-Economic Analysis of Wood Charcoal Production as a Significant Output of Forest Bioeconomy in Africa. *Forests* **2021**, *12*, 568. https://doi.org/10.3390/f12050568

CL ID	03	Section no.	2.1	Date : 27/06/2023
Description of CL				
Project Description Document does not provide clarification regarding direct impact of Project Activity on the following SDG: 1. SDG 5 and 8, - The information is found insufficient as the PD does not include the details on the demographic characteristics of employment created (no. of female employees, no. of employees under the age of 35 etc.) PP shall justify and provide supportive. 2. SDG 8.b.1- PP shall justify and provide supportive of how training assists in improving employability of youth, given PD mentions no information of baseline unemployment.				
Project participant response				**Date :** 28/07/2023

1. PP has furnished the demographic details of the employment created during the MP 1 in the standard evidence submission during the VCS verification and the same is also enclosed along with the SD Vista Round 1 PP responses. The SD Vista Monitoring Report has also captured the highlighted information in section 3.3 2. The technical and skill development programs imparted to the employees will help perform their duties in a much proficient / efficient manner. In addition, this will also help the employees in the long run in their professional growth. This SDG is not targeted for the unemployed population, but this shall certainly improve the skill levels of the employees, thus bolstering their employability in the job market
Documentation provided by project participant
1) List of Employees-NG VCS 2673
VVB assessment **Date:** 02/08/2023
1. The List of Employees provided by PP only provides information regarding gender of employees. PP is requested to also make available details of other demographic factors (especially of employee age groups) to adequately justify impact created for SDG 8. 2. PP is requested to provide a copy of any coursework/ worksheets/training material employed during training to demonstrate areas and capacities where workers have gained skill development. OPEN.
Project participant response **Date :** 28/07/2023
PP has furnished the list of employees by including their age details and also shared the coursework/ worksheets/training material for VVB's reference
Documentation provided by project participant
1. List of Employees with age details 2. Coursework/ worksheets/training material
VVB assessment **Date:** 02/08/2023
PP has furnished employment records with demographic characteristics of the workforce. Likewise necessary coursework (PowerPoint Presentations on CDM Guidelines, Usage Survey Training Guidelines etc.) has also been provided, substantially justifying impact on SDG 5 and 8. The findings thus stand CLOSED.

CL ID	04	**Section no.**	4.1.2	**Date :** 27/06/2023
Description of CL				
PP shall include supportive information on how the cause-effect linkage between the project activity and the positive Expected Impact on Natural Capital and Ecosystem Services. • Less charcoal dust pollutes rivers. • Less soil erosion due to reduction in cutting trees				
Project participant response				**Date :** 28/07/2023
The aforementioned section 3.4 mentions net stakeholder well-being impacts. PP has indicated that the monitoring plan for substantiating said indicator parameters, namely; less charcoal dust to pollute rivers and less soil erosion due to reduction in cutting trees is done through calculating the total fuel consumption per year. This has been indicated by the PP through calculation of SDG 12.2 present in VCS 2673 SD Vista - SDG Impact Tool-Ex Ante_v1.0.xlsx, already submitted to the VVB. Charcoal dust, present in baseline scenario is a big contributor to pollution of water bodies[4]. The reduction in overall consumption of fuel would reduce the amount of pollution caused due to it and hence, would have a positive expected impact on Natural capital and Ecosystem services. Similarly, cutting down trees for fuelwood would be a big cause of soil erosion since it is an established fact that loss of tree cover is one of the biggest contributors to soil erosion/ losing top layer of soil[5]. Since project activity is reducing the overall fuel consumption in HOUSEHOLDs, the cutting down of trees is also reduced, and as a result soil erosion is reduced as well. This would establish a cause-effect linkage between project activity and the positive Expected Impact on Natural Capital and Ecosystem Services.				
Documentation provided by project participant				
1. Revised SD Vista PD v1.1				
VVB assessment				**Date:** 02/08/2023

[4] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8220176/

[5] vhttps://forest.moscowfsl.wsu.edu/smp/docs/docs/Elliot_1-57444-100-0.html

The PDD has been updated to include necessary resources (peer reviewed scientific papers), which sufficiently establish the cause-effect linkage between project activity and the positive expected impact on natural capital and ecosystem services. The revised PDD now adequately justifies the impact of PA on less charcoal dust in rivers and less soil erosion.
The finding stands CLOSED.

CL ID	05	Section no.	2.2.10	Date : 27/06/2023

Description of CL

The PD under section 2.1.11 describes that "Post project activity, **it is ensured** that the rural and urban households will continue to use improved cookstoves in future, due to the benefits associated with them, and thereby accrue significant environmental as well as socio-economic benefits".

PP shall substantiate how the continued usage is ensured. As per template guidelines the benefit Permanence shall describe the plan to maintain and enhance project benefit after project activities have ceased.

Project participant response — **Date :** 28/07/2023

PP has clarified in section 2.1.11 that the purpose of the project activity is to change the cooking technology HOUSEHOLDs by distributing improved cookstoves (ICS), which will enable households to reduce their fuel consumption, saves the cooking time, improves their health conditions by reducing indoor GHG emissions and enhances the employment opportunities available to them. It is envisaged that the project HOUSEHOLDs will be encouraged to continue use the project cookstoves in the future due to the environmental and socio-economic incentives associated with its continued usage.

Documentation provided by project participant

1. Revised SD Vista PD v1.1

VVB assessment — **Date:** 02/08/2023

PP mentions in Section 2.1.11 of PDD that 'The project activity also ensures the benefits are permanent in nature and **will not be reversed until the project devices are functional**.' Given that lifetime of both project device and project activity is of 07 years, the PP shall clarify how it will ensure that, as quoted in above response, **"**project HOUSEHOLDs will be encouraged to continue use the project cookstoves in the future**."**
OPEN.

Project participant response — **Date :** 17/08/2023

PP has redrafted the Section 2.1.11 of PDD as per the following,
"UpEnergy Group ensures the environmental and other co-benefits results due to project activity are long term and permanent in nature by undertaking the following long term aims

1. Awareness campaigns will be conducted at a regular interval to disseminate the multiple benefits on adoption of project ICS, this will include training sessions, community cooking activities, circulating brochures, documentary videos etc.
2. The warranty period of project ICS shall be extended till 5 years period to ensure maximum up taking of ICS usage and to ensure the sustenance of associated environmental, socio-economic benefits related to project activity

Nevertheless, it is envisaged that the rural and urban households will be encouraged to continue use improved cookstoves in future, due to the benefits associated with them, and thereby accrue significant environmental as well as socio-economic benefits"

Documentation provided by project participant

Revised SD Vista PD v1.2

VVB assessment — **Date:** 02/08/2023

PP has redrafted and updated the PDD to incorporate how PA will ensure 'benefit permanence' (awareness activities and extended warranty). This inclusion has been found to adequately justify the extended impact even after PA has ceased. The finding thus stands CLOSED.

CL ID	06	Section no.	2.3.5	Date : 27/06/2023

Description of CL

Project Description Document does not clarify how discrimation and corruption is prevention measures are applied to all the entities. Please substantiate, as per template guideline :**Describe measures** used to ensure that the project proponent (listed in Section 2.1.4 above) and **other entities** involved in the project (listed in section 2.1.5 above) are not involved or complicit in any form of corruption. PP shall justify and provide supportive.
Project participant response **Date :** DD/MM/YYYY
PP / UpEnergy Group has a stringent group policy for preventing the discrimination in any form, Since its group policy promotes equal opportunities for employment and advancement for employees regardless of age, gender, race, religion, colour, disability, national origin, or any other legally protected category and will not tolerate any form of unlawful discrimination. (Please refer to Section 5.4 of UPE Group Staff Handbook). Also, the PP has Employee Disciplinary Code which insists a strong punishment up to criminal prosecution / termination of job for the bribery / forgery related offences (Please refer to ANNEXURE 1: of UPE Group Staff Disciplinary Code).
Documentation provided by project participant
1) UPE Group Staff Handbook 2) UPE Group Staff Disciplinary Code
VVB assessment **Date:** 02/08/2023
The review of 'UPE Group Staff Handbook' and 'UPE Group Staff Disciplinary Code' confirms PP's policy (and preventive measures in place) to prevent discrimination and corruption in the organization. The PP is requested to, as per template requirements, also supplement evidence regarding their **other entities'** (as described in section 2.1.5 of PDD) policies and safeguards pertaining to the same. The finding stands OPEN.
Project participant response **Date :** 17/08/2023
PP would like to clarify that the Climate Catalyst Ltd, a Subsidiary of UpEnergy Group - a private limited liability company registered in terms of the company in Nigeria with registration number: 1863275 and all the organizational and HR related policies of UpEnergy Group are applicable to Climate Catalyst Ltd. Hence the evidences provided related to policies and safeguards are relevant to other entities as well. PP has enclosed the share certificate of Climate Catalyst Ltd, Nigeria as a proof to establish the UpEnergy's holding on it
Documentation provided by project participant
Share certificate of Climate Catalyst Ltd
VVB assessment **Date:** 25/08/2023
VVB has assessed the share certificate and found it to adequately substantiate Climate Catalyst Ltd.'s association with UpEnergy Group as a subsidiary, thus functioning under the jurisprudence of organizational and HR policies pertaining to UpEnergy Group. The finding thus stands CLOSED.

CL ID	07	**Section no.**	2.2.8	**Date :** 27/06/2023
Description of CL				
The causal chain shall include all direct positive and negative, intended, and unintended consequences of project activities. It may include indirect consequences. PP shall clarify if there are no negative, unintended consequences envisaged due to project activity implementation as per para 2.1.5 of the SD-Vista Standard 1.0.				
Project participant response				**Date :** 28/07/2023
PP would like to clarify that a direct and unintended negative consequence of project activity is mentioned in the PD (refer to section 2.2.2), namely, "Local vendors are those who are involved in supplying charcoal to the project area. Project activity carried out by UpEnergy group results in reduced consumption of charcoal in the beneficiary households and thus could negatively affect livelihoods of the local vendors". PP has updated the same in the PD in the section 2.1.9 Causal chains.				
Documentation provided by project participant				
1) Revised SD Vista PD v1.1				
VVB assessment				**Date:** 02/08/2023
PP has included 'negatively affect livelihoods of the local charcoal vendors' as a direct and unintended negative consequence of project activity under section 2.2.9. The same has also been incorporated in the updated causal change diagram. This inclusion has been found to be appropriate and in line with SD-Vista Standard 1.0. The finding stands CLOSED.				

CL ID	08	**Section no.**	2.1	**Date :** 27/06/2023
Description of CL+				

Official indicators for SDG 5.4 and 5.5 though identical to the one mentioned in PDD, have not been utilised. As per SD-VISta-Project-Description-Template-v1.0, "Where possible, relate all contributions to official SDG targets and indicators." PP shall clarify why official indicators description is not applied.
Project participant response **Date :** 28/07/2023
PP would like to clarify that the aforementioned indicators have been devised as per SD-VISta-Project-Description-Template-v1.0 (***Refer to***: Summary of SDG contributions, point no. 2; page no. 1). The template states that, "Where a project's self-defined measure for tracking benefits does not align with an official SDG indicator, do not provide an indicator number. Instead, write a project-specific indicator that relates to the most appropriate SDG target". PP would like to further confirm that project specific indicators have been kept to align it with the project activity.
Documentation provided by project participant
VVB assessment **Date:** 02/08/2023
Minor differences have been observed between official SDG indicators (https://unstats.un.org/SDGs/metadata/) and those applied by PP, hence justifying project's self-defined measures for tracking. This is found to be in line with template guidelines. Thus, the finding stands CLOSED.

CL ID	09	**Section no.**	TR Comment	**Date :** 05/09/2023
Description of CL				
PP shall provide clarification regarding the following: 1. Section 2.2.3 of SD VISta PD mentions "A live demonstration of Improved Cookstoves (ICS)/SmartHome Stove, SmartHome Electric Pressure Cooker and Domestic & Institutional Safe Drinking Water System were conducted for the participants", However, The LSC invitation only mentions ICS and Water purification system. Please review and elaborate on the inclusion of the other devices. 2. Section 2.2.9 of SD VISta PD describes distribution and usage of protection gear – safety shoes, gloves, helmets, glasses etc- by its employees for ICS distribution. PP shall clarify the need for the same and if end users are supplemented with safety equipment too.				
Project participant response				**Date :** 10/10/2023
1. PP has conducted a combined LSC to sensitize Nigerian population with the various kinds of clean energy products that are distributed by the UpEnergy Group at a subsidized price. However, as mentioned in the section 2.1.1 of SD Vista PD, PP would like to clarify that this grouped project activity only involves distribution of charcoal and firewood ICS to replace the baseline traditional / inefficient charcoal and firewood respectively. 2. PP would like to clarify that the personal safety gears will be provided only to employees of UpEnergy Group who involves in manufacturing, handling and distribution of ICS to meet the requirement of National Policy on Safety, Health and Environment at Workplace. Also, UpEnergy own dedicated safety policy which adheres to national safety standards.				
Documentation provided by project participant				
1) RV1_VCS_2673_PRR_2Aug2023- 2) VCS_Nigeria_2673_Joint-PDMR_v4				
VVB assessment				**Date:** 02/08/2023
The VVB team has assessed and found the explanation and subsequent addition in the PD to be satisfactory, The finding stands closed.				

Table 2. CAR from this validation

CAR ID	01	**Section no.**	2.1.8, 2.2.13, 4.2, 3.2 of SD-VISta PD	**Date :** 27/06/2023
Description of CAR				

The following information is found missing in Project Description Document v1.0: 1. Section 2.1.8 of PDD shall include brief summary of the Social, Economic, and natural capita conditions at the start of the Project activity as required by the template guideline. PP shall indicate the aforementioned three conditions explicitly. 2. Section 2.2.13 of project description does not include details on how information regarding assessor's site visit will be informed to stakeholder during assessment process. As per template guidelines section 2.2.13 shall Include information on how they will be informed of the assessor's site visit in a timely manner before the site visit occurs, and how direct and independent communication between stakeholders or their representatives and the assessor will be facilitated. 3. Expected Impacts on Stakeholder/Natural Capital and Ecosystem Services: Section 3.2 and 4.2 of project description does not include information regarding **magnitude** of 'Resulting Change in Well-Being' as per required by the template guidelines. The Resulting Change in Well-being shall describe characteristics and magnitude of impact on each stakeholder group. 4. GP1.2 and GP1.3 Applicability criteria are not included
Action taken on CAR — **Date :** DD/MM/YYYY
PP has included the missing details in the revised SD Vista PD v1.1
Documentation provided by project participant
Revised SD Vista PD v1.1
VVB assessment — **Date:** 02/08/2023
1. PP is requested to describe the baseline scenario pertaining to employment status of women, youth, people with disabilities and other demographics in the project location, hence substantiating need for SDG targets 5.1, 5.5 and 8.b.1, as claimed by the PA. OPEN 2. The PDD has now been revised to include details of how information regarding assessor's site visit will be given to stakeholder during assessment process under section 2.2.13. CLOSED. 3. The PDD has now been revised to include information regarding the magnitude of 'Resulting Change in Well-Being', under sections 3.2 and 4.2. CLOSED. 4. The PDD has now been revised to include GP1.2 and GP1.3 Applicability criteria under Section 2.3.11 and is now in line with Appendix 1 of Sustainable-Development-Verified-Impact-Standard-v1.0. CLOSED.
Project participant response — **Date:** 17/08/2023
1. PP would like to clarify that baseline scenario for the SDG targets are 5.1, 5.5 & 8.b.1 are very much project specific and their baseline values will be "Nil" since the benefits would have not been realized without occurrence of the project.
Documentation provided by project participant
VVB assessment — **Date:** 25/08/2023
1. The baseline value for SDG Targets 5.1, 5.5 and 8.b.1 have been assessed and any found to be absent in the pre project scenario, hence creating requirement for the project activity. The finding is now CLOSED.

Table 3. FAR from this validation

FAR ID	NA	**Section No.**		**Date : DD**/MM/YYYY
Description of FAR				
NA				
Project participant response				**Date :** DD/MM/YYYY
NA				
Documentation provided by project participant				
NA				
DOE assessment				**Date:** DD/MM/YYYY
NA				