



Date: 2023/03/27

Non-Technical Summary

Background:

In rural communities throughout Kenya, traditional stoves burning wood or charcoal serve as the primary source of fuel for cooking, with 75% of families relying on these methods. However, these stoves have proven to be inefficient and emit substantial amounts of smoke and hazardous pollutants, leading to serious health issues and contributing to deforestation of Kenya's forest resources. It is particularly noteworthy that women and children in these communities are especially vulnerable to the harmful effects of traditional stoves, which can lead to the development of respiratory diseases associated with inhalation of smoke. Furthermore, the time invested by households in gathering fuel presents a significant opportunity cost, as it may preclude other activities such as small business development and education.



The use of firewood for cooking also contributes to global emissions and climate change. In response to these challenges, Solaxy Group Corp and its partners have launched the Clean Cookstove Project, which aims to provide improved stoves to households in Kenya. The project's goal is to address the health and environmental impacts of traditional stoves, while also enhancing the socio-economic well-being of women and children in the communities it serves. By reducing fuel consumption and indoor air pollution, the improved stoves will not only lead to a lower cost of fuel and less time spent collecting wood, but also have significant implications for the health of the beneficiaries. Furthermore, the project will contribute to the preservation of forests and the reduction of carbon emissions, resulting in a greener and more sustainable future for Kenya.

Project Description:


The Solaxy Clean Cookstove Project is a joint effort between Solaxy Group Corp and Qatalogue Limited. The project aims to distribute 200,000 improved cookstoves to households in Kenya over the next two years. The improved cookstoves use less fuel, emit fewer harmful pollutants, and are safer to use than traditional stoves. The project will involve physical distribution of the cookstoves as well as feedback sessions to ensure that the cookstoves are meeting the needs of the users.



About the Cookstove:

The Solaxy Clean Cookstove represents an efficient alternative to traditional cooking methods. Constructed with durable materials

and lined with ceramic, this cookstove has a high-power thermal efficiency of 51.5% that ensures even heat distribution, which results in reduced fuel consumption. Moreover, the design of the cookstove limits the emission of harmful pollutants, including carbon monoxide and particulate matter, which pose a significant risk to human health. The Solaxy Clean Cookstove is a purpose-built stove that burns less fuel and emits fewer harmful pollutants in comparison to traditional stoves. The stove includes a unique combustion chamber that guarantees complete burning of fuel, resulting in reduced fuel consumption and lower smoke emissions.

	SOLAXY	
	STOVE PERFORMANCE	
	Solaxy Stove with Pot Skirt	
	Document No:	SO/FW-32
	Issue No:	02
	Revision No:	01
	Page:	1 of 1
Date of Issue:	2 nd March, 2022	
Next Review date:	March, 2024	

The role of carbon finance

The initiative aims to mitigate greenhouse gas emissions by introducing an efficient cookstove that requires less firewood compared to the traditional wood stove. The proceeds from the sale of carbon credits will be utilized to finance the project's expenses, which include the distribution of free cookstoves to the targeted beneficiaries. The application of carbon finance not only improves the well-being and health of the targeted communities but also contributes towards the global effort to combat climate change.

Name of Stove:		Solaxy-FW32				
Type of Stove:		Rocket Stove Firewood				
Number of Test:		(3) Three Tests				
Fuel Type:	Firewood	Fuel Properties	Water Content:	16%		
			Low Heating Value (LHV):	18,253.45 KJ/KG		
		Test Date:	20 th , 22 nd & 25 th April 2022			
		Standard Referred:	Water Boiling Standard 4.2.3			
		Test Environment Conditions:	Ambient Temp:	24°C		
			Humidity:	55-60%		
			Wind Speed:	No wind		
		Fan Power (W):	N/A			
		Test Equipment:	Weight Scale	LEMS	Gravimetric	
		Model:	Class 111	2029	CX 265	
		Date of Calibration:	Jan 19, 22	Feb 13, 22	Rotameter	
		Thermal Efficiency	51.5%			
Sampling	N/A					
Test Items		Units	Average	STDeV	Sub-Tier	Tier
Thermal Performance	High Power Thermal Efficiency	%	51.5	0.001	4	2
	Low Power Specific Consumption Rate	MJ/min/L	0.035	0.002	2	
Emissions	High Power CO	g/Mjd	4.096	0.663	4	1
	Low Power CO	g/min/L	0.093	0.005	4	
	High Power PM _{2.5}	mg/Mjd	711.714	52.355	1	
	Low Power PM _{2.5}	mg/min/L	7.267	0.414	1	
Indoor Emissions	CO	g/min	0.399	0.024	4	0
	PM	mg/min	64.610	2.444	0	
Performance Measures		Units	Average	STDeV	CoV	
Fuel to Cook 5L (850/1500)		g	703.346	21.411	3%	
CO to Cook 5L (20)		g	28.888	0.172	1%	
PM to Cook 5L (1500)		mg	3001.53	6.052	0%	
Energy to Cook 5L (15,000/25,000)		kJ	11910.0	362.559	3%	
Time to Boil		min	22.059	0.789	4%	
CO ₂ to Cook 5L		g	669.334	14.754	2%	

Safeguarding principles




We assessed the project design against the safeguarding principles.

- 1) Human rights
- 2) Gender equality and women's rights
- 3) Community health, safety and working conditions.
- 4) Cultural heritage, indigenous peoples, displacement, and resettlement
- 5) Corruption
- 6) Economic impacts
- 7) Climate and energy
- 8) Water
- 9) Environment, ecology, and land use


Based on our assessment, we do not anticipate any adverse impacts of the Solaxy Clean Cookstove Initiative on the safeguarding principles mentioned above. However, we welcome your feedback and request that you notify us if there are any concerns or risks associated with the installation of fuel-efficient cookstoves that could potentially compromise any of the principles stated.


Economic, Social, and Environmental Impacts:

The Solaxy Clean Cookstove project is anticipated to yield substantial economic, social, and environmental advantages for the achievement of the Sustainable Development Goals (SDGs).

 The icon for SDG 1, 'No Poverty', features a red square with the number '1' and the text 'NO POVERTY' at the top. Below this, there is a white silhouette of a family consisting of two adults and two children.	<p>SDG1:</p> <p>No Poverty: Clean cookstoves can help reduce poverty by reducing fuel costs and improving health outcomes, thereby increasing productivity and income.</p>
 The icon for SDG 3, 'Good Health and Well-being', features a green square with the number '3' and the text 'GOOD HEALTH AND WELL-BEING' at the top. Below this, there is a white graphic of a heartbeat line and a heart.	<p>SDG3:</p> <p>Good Health and Well-being: Traditional cookstoves release harmful pollutants that can cause respiratory illnesses and other health problems. Clean cookstoves, on the other hand, produce fewer pollutants and can improve indoor air quality, leading to better health outcomes.</p>
 The icon for SDG 5, 'Gender Equality', features a red square with the number '5' and the text 'GENDER EQUALITY' at the top. Below this, there is a white graphic of a female symbol with an equals sign inside.	<p>SDG5:</p> <p>Gender Equality: Women and girls are often responsible for cooking in many households and are disproportionately affected by the health impacts of</p>

	traditional cookstoves. By reducing exposure to harmful pollutants, clean cookstoves can improve the health and well-being of women and girls.
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	<p>SDG7:</p> <p>Affordable and Clean Energy: Clean cookstoves use less fuel and produce fewer emissions, making them a more sustainable and environmentally friendly option than traditional cookstoves.</p>
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	<p>SDG13:</p> <p>Climate Action: Traditional cookstoves contribute to climate change through the release of greenhouse gases. Clean cookstoves can help mitigate climate change by reducing emissions and promoting sustainable energy practices.</p>
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Method of communication and feedback response

Please be advised that the following methods of contact details are at your disposal should you require further information or wish to provide feedback on the Solaxy Clean Cookstove Initiative project. We welcome any inquiries or comments you may have and look forward to the opportunity to address them.

	Method	Justification
Continuous/ Input/ Feedback	<p>Country Office:</p> <p><u>Qatalogue Limited</u></p> <p>Peterson House, Flyover Junction, Magumu - Jabini Road.</p> <p>P. O Box 137, 00218. Ngecha. Kenya.</p> <p><u>Solaxy Group Corp.</u></p>	<p>Feedback can be given at any time directly to staff at distribution locations or who are regularly visiting evaluation checkpoints. During these visits, the staff can interact with the users and can receive input and relay them to the country office.</p>

	99s Almaden Blvd. Suite 600 San Jose, CA 95113	Boxes for written comment can be found in our field offices.
Telephone access	<p><u>Kenay Office:</u></p> <p>Qatalogue Limited Contact: David Munyua Tell: +254720254253</p> <p>Solaxy Group Corp. Contact: Danoosh Askarpoor +011-408-610-4700</p>	Input and concerns can be phoned in to our field office.
Internet/email access	<p>Via Post:</p> <p><u>Solaxy Group Corp.</u> Contact: Danoosh Askarpoor danoosh@solaxygroup.com</p> <p><u>Contact : office</u> www.solaxygroup.com info@solaxygroup.com</p> <p><u>Qatalogue Limited</u> Contact : David Munyua dmunyua@qataloguelimited.com</p>	Input and grievances can be sent at any time to the office via email to the contact person.

Stakeholder Feedback Collection Form

Project title: Solaxy Clean Stove Initiative – Kenya

Date:	
Stakeholder's Name:	
Organization:	
Contact details:	
What do you like about the project?	
What do you not like about the project?	
What impacts do you think the project will bring to the local society?	
Any other comments on the project?	
Signature:	