NON-TECHNICAL SUMMARY

Effective Clean Cooking Biomass Solutions Program for Africa ("PoA") Design Consultation

Introduction

The proposed Programme of Activities "Effective Clean Cooking Biomass Solutions Program for Africa" is being developed with the objective of replacing inefficient cookstoves households across Africa. This will be achieved through the distribution and installation of efficient cooking devices including improved wood and charcoal cookstoves.

Purpose and technology of the Programme of Activities (PoA)

The consumption of biomass consumption for domestic energy has many negative impacts on households and larger environmental impacts experienced at the community level. These include deforestation and land degradation, Greenhouse Gas ("GHG") emissions, loss of soil fertility and water retention capacity. At the household level, Indoor air pollution ("IAP") occurs where health-damaging pollutants are released while combusting biomass. IAP accelerates the probability of contracting diseases including pneumonia, stroke, ischemic heart diseases, chronic obstructive pulmonary diseases, and lung cancer.

Effective Climate Solution 1 FZCO and its affiliates have designed this carbon asset to provide access to modern cooking technologies to end-users across Africa and to mitigate the adverse environmental and social impacts of continued biomass usage on traditional & inefficient cookstoves in the baseline scenario.

The target group of beneficiaries are those households which use biomass as their primary source of cooking fuel in the pre-project scenario. The thermal efficiency improvements in the project devices, relative to the baseline cookstoves, generate significant fuel savings. These fuel savings serve as the basis of the carbon emissions reductions computed for this project and the varied sustainable development indicators benefits for households who participate in the project.

The Coordinating and Managing Entity (CME) of the proposed PoA is Effective Climate Solution 1 FZCO or its appointed affiliate entity. The PoA will be certified by the Gold Standard for the Global Goals ("Gold Standard") applying the Gold Standard methodology 'REDUCED EMISSIONS FROM COOKING AND HEATING: Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC) v4.0.'

The first project activities under the PoA will see distribution of improved cookstoves to households in Malawi, Nigeria & Madagascar where local stakeholder consultations have been planned.

Description of the Programme of Activities (PoA)

The PoA will be developed under the guidance of the applicable Gold Standard methodology 'REDUCED EMISSIONS FROM COOKING AND HEATING: Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC) v4.0.'

Geographic boundary – The PoA is designed as multi-country African PoA designed with 48 countries in the PoA Boundary, see below:

1	Angola	13	Djibouti	25	Lesotho	37	Senegal
2	Benin	14	DRC	26	Liberia	38	Seychelles

3	Botswana	15	Equatorial Guinea	27	Madagascar	39	Sierra Leone
4	Burkina Faso	16	Eritrea	28	Malawi	40	Somalia
5	Burundi	17	Eswatini/Swaziland	29	Mali	41	South Africa
6	Cabo Verde	18	Ethiopia	30	Mauritania	42	South Sudan
7	Cameroon	19	Gabon	31	Mozambique	43	Sudan
8	Central African Republic	20	Gambia	32	Namibia	44	Tanzania
9	Chad	21	Ghana	33	Niger	45	Togo
10	Comoros	22	Guinea (Republic of)	34	Nigeria	46	Uganda
11	Congo	23	Guinea Bissau	35	Rwanda	47	Zambia
12	Cote d'Ivoire	24	Kenya	36	Sao Tome & Principe	48	Zimbabwe

Target group – Households using traditional cookstoves using nonrenewable biomass (wood and charcoal).

ODA – No public funding or ODA will be diverted for implementation of the PoA.

Technologies included in the PoA

The first set of project activities will distribute "ECOA" wood and charcoal stoves, manufactured in Africa, with the highest rated thermal efficiency in the region.

ECOA CHAR

ECOA WOOD

PRODUCT SPECIFICATIONS		
PARAMETER	**ECOA WOOD**	**ECOA CHARCOAL**
Thermal Efficiency	53.7%	71.3%
Cooking Power Output (kW)	1.228kW	0.956kW
PM2.5 per useful energy delivered (mg/MJd)	210.2 mg/MJd	38.16 mg/MJd
CO per useful energy delivered (mg/MJd)	5.50 g/MJd	3.78 g/MJd
Safety Score	97.5%	90%

Project activities under the PoA may accommodate different models of biomass stove types in accordance with the provisions of the GS methodology TPDDTEC V.4.0, upon express approval of the CME.

Implementation Plan

- POA level Design Consultation – March – April 2025
- Local Stakeholder Consultations – March – May 2025
- Baseline Studies – March 2025
- PoA & VPA registrations – October 2025

Stove distributions will be VPA specific and will be communicated for each VPA.

Carbon credits

Greenhouse gas (GHG) emission reductions are achieved through fuel savings of non-renewable biomass. These fuel savings will be calculated as avoidance carbon credits using the stated Gold Standard methodology and applicable certification rules and procedures.

The revenues from the sale of carbon credits help amongst others to:

a. distribute improved cooking devices at a subsidized price affordable for end-users.
b. scale up and expand the programme, thus reaching a wider range of end-users.
c. generating more jobs.
d. provide a reliable after-sales service.
e. sensitize and raise end-users' awareness about the benefits and how to use the improved cookstoves.

Motivation and Benefits of the Programme

The project stoves reduce the consumption of non-renewable biomass (i.e., wood and charcoal) and in so doing, improve critical socio-economic outcomes for households including health, financial and time savings for beneficiary households.

Baseline indoor air pollution associated with combusting non-renewable biomass is related to diseases including pneumonia, stroke, ischemic heart diseases, chronic obstructive pulmonary diseases, and lung cancer[1].

Environmental Benefits:

[1] https://www.who.int/en/news-room/fact-sheets/detail/household-air-pollution-and-health

The PoA is designed to significantly reduce dependence on non-renewable biomass for domestic energy needs associated with cooking, previously supplied by required by traditional cookstoves, thus reducing deforestation connected to cooking biomass fuel. In addition, the reduction of the use of non-renewable biomass for cooking will lead to a reduction in emissions such as NOx, SOx, particulate matter ("PM") 2.5/10, CO, thus improving indoor air quality. Usage of the devices under this PoA will aid in reducing the emission of GHG gases associated with global warming including CO_2, CH_4 & N_2O.

Social and economic benefits:

Sustainable Development Goals (SDGs) Impact (non-exhaustive)

Besides reducing GHG emissions in line with the United Nations Sustainable Development Goal (SDG (Sustainable Development Goals)) number 13 'Climate Action', this programme will also seek to increase other long-term sustainability benefits for the local families, sales agents, data enumerators, as well as the local environment. Project activities under the PoA are expected to contribute to different Sustainable Development Goals (SDGs) in the following ways:

1. Reduction in end-user expenses related to the purchase of fuel for cooking. Household expenditure on fuel can account for a substantial contribution to domestic budgets. A reduction in nonrenewable biomass consumption can create significant financial savings, allowing households to employ those savings to other constructive uses, or savings. **(in line with SDGs 1 'No Poverty')**
2. A reduction in carbon monoxide and particulate matter emissions during combustion in households will reduce indoor air pollution and thereby decrease incidences of respiratory diseases, headaches, and itchy eyes, particularly for women and children who spend a lot of their time in cooking activities **(in line with SDG 3 'Good health and well- being').**
3. The design efficiencies of improved cookstoves allow for shorter mealtimes and reduce the frequency

of fuel purchases. This then creates time savings, particularly fir women and girls, who provide unrecognized labor associated with fuel collection and meal preparation, creating time that can be used for constructive activities of this group of beneficences **(in line with SDG '5 'Gender Equality').**

4. The PoA will accelerate Increased access to clean, modern, and efficient cooking technologies **(in line with SDG 7'Affordable and Clean Energy')**
5. Sales agents and data collection enumerators will receive specialized training with respect to the use of the improved cookstoves, economic, and environmental benefits **(in line with SDG 4 'Quality Education').**
6. The implementation of the PoA will create jobs for people employes for the manufacturer, distribution, sales, and customer support for the respective projects **(in line with SDG 8 Decent Work for All)**
7. Fuel savings associated with the use of the improved cookstoves will have a collective benefit of reducing the demand for non-renewable biomass in Africa, which is associated with deforestation **(in line with SDG 15 SDG 15 'Life on Land')**

Compliance With Safeguards Principles

A comprehensive review of the proposed PoA's compliance with the Gold Standard Safeguarding Principles shall be undertaken at the VPA level respecting the Host Party regulations and the local socio-political context. A high-level summary of compliance is provided below:

Social Principles

- **Principle 1: Human rights**: The distribution of improved cooking devices or any activities related to the operation of the PoA or its respective VPAs, has minimal risk of contravening any human rights laws or international conventions and all the associated provisions listed in the Safeguarding Principles (version 2.1) of the Gold Standard for Global Goals. At the national Local Stakeholder Consultation (LSC) level, the CME shall conduct and communicate to stakeholders a comprehensive review of all applicable laws and regulations to ensure that each Host Party's regional, national, and internationally ratified internal conventions and protocols on human rights have been adhered to.

- **Principle 2: Gender equality and Women's Empowerment**: The use of efficient devices in substitution or reduction of traditional woody biomass will generate specific outcomes that benefit and respect women's rights. Individual benefits, and an assessment of baseline conditions in the pre-project

scenario, shall be provided for each LSC as a requirement to SDG 5 claims as intended in the PoA Design.

- **Principle 3: Community Health and Safety**: There are no real or perceived negative community health outcomes envisaged for the PoA. The CME shall ensure that all VPAs (through the respective LSCs and Design Documentation) define and communicate compliance with all safeguards associated with health and safety working conditions including assessments that protect the health and safety of people employed for the operation of the VPA.

- **Principle 4: Cultural Heritage, Indigenous Peoples, Displacement and Resettlement:**

  The PoA is defined by the installation of portable cooking devices, so there is no risk that the PoA's implementation will affect any cultural heritage sites. The CME shall ensure that all VPAs demonstrate compliance with this requirement and update all stakeholders at the VPA level with specific respect to each VPA's safeguards to protect:

  - Against alteration, damage, or removal of any sites, objects, or structures of significant cultural heritage Sites of cultural and historical heritage
  - Against forced eviction and displacement
  - Land tenure and other rights
  - The rights of Indigenous people

- **Principle 5: Corruption:** The CME shall ensure, and all VPAs will be required to demonstrate and communicate to stakeholders that corruption and corrupt practices of any kind shall not be tolerated in the implementation of any VPA for the life of the PoA.

- **Principle 6 – Economic Impacts:** The CME will not tolerate the inclusion of any VPAs that use forced labor or engage in any employment practices that violate international and national labor laws. Each VPA must demonstrate and communicate to stakeholders all safeguards and compliance with the provisions of Principle 6 of the Gold Standard Safeguarding Principles Requirements.

Environmental and Ecological Principles

Principle 7: Climate and Energy

- **Emissions:** The project will decrease GHG emissions from the baseline scenario over a period of up to 20 years (PoA duration). Using the project cookstoves will help avoid the emissions of many tons of CO2 in the atmosphere.
- **Energy Supply:** This project's objective is to implement improved cookstoves that use less non-renewable biomass**.** So intrinsically, the quantity of wood taken from natural resources is reduced

compared to the baseline scenario.

Principle 8 :Water

- **Impact on Natural Water Patterns/Flows**: The project will not have any negative impact on the water resources in the region. There will be no meaningful change in the volume of water available for consumption by the households.
- **Erosion**: The project reduces notably fuelwood consumption and thus protects the natural forest cover. Therefore, the possibility of erosion will indirectly be reduced, and water stability enhanced.

Principle 9: Environment, Ecology and Land Use

- **Landscape Modification and Soil:** No crops or other products will be produced in the project.
- **Vulnerability to Natural Disasters**: There will be no impact by the project on natural disasters. The project will not lead to any land use changes and will have no impact on the land within the project area. No exacerbation of natural or human-caused hazards can therefore be expected.
- **Biosafety and Genetic Resources**: No GMOs will be used in the project.
- **Release of pollutants**: Due to the project activities fuelwood consumption is expected to be reduced, and no fossil fuel is expected to be burned, there is no risk of releasing pollutants to the environment.
- **Hazardous and Non-hazardous Waste**: In the production phase of the technologies, the project outsources the services of local manufacturers that adhere to strict safety requirements as required by law and as such there is no possibility of generation of hazardous and non-hazardous waste during the project. The project will implement a repair and waste management strategy throughout the project's lifetime.
- **Pesticides and Fertilizers**: The project does not involve the application of pesticides and fertilizers.
- **Harvesting of Forests**: The project will reduce fuel wood demand and thus also the harvest rate of forests. Therefore, the project has a positive impact on the forest cover.
- **Food security**: The project does not impact on the growth of food nor the quality of the food.
- **Animal welfare**: The project does not involve animal husbandry.
- **High Conservation Value Areas and Critical Habitats**: Each VPA will be required to demonstrate safeguards and compliance with national and international protocols on critical habitats and biodiversity.
- **Endangered Species**: The PoA is not envisaged to have any impact on their habitat as it only affects existing households.
- **Invasive alien species**: The project will not introduce any alien species.

For Feedback/Suggestions/Partnerships CONTACT

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