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TEMPLATE

KEY PROJECT INFORMATION & PROGRAMME DESIGN DOCUMENT (POA-DD)

PUBLICATION DATE **31.05.2022**

VERSION **2.1**

RELATED SUPPORT

[Programme of Activity requirements](#)

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Key Project Information

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entity(ies)

KEY PROJECT INFORMATION

| | |
|---|---|
| GS ID of Programme | 12118 |
| Title of Programme: | Green Tanzania Cookstove Programme |
| Type of PoA | <input checked="" type="checkbox"/> Non – Forestry and/or Non - AGR PoA <input type="checkbox"/> Forestry and/or AGR PoA |
| VPAs scale included in the PoA <i>Note that same PoA can included VPAs of different scales. Please select all applicable.</i> | <input type="checkbox"/> Microscale <input checked="" type="checkbox"/> Small scale <input type="checkbox"/> Large scale |
| Start Date of POA | To be inserted |
| Date of Design Certification | To be inserted |
| Start date of crediting cycle of PoA | |
| Version number of the PoA-DD | 1.0 |
| Completion date of the PoA-DD | 15/02/2023 |
| Coordinating/managing entity | OffgridSun |
| Project Participants and any communities involved | N/A |
| Host Country (ies) | Tanzania |
| Activity Requirements applied | <input checked="" type="checkbox"/> Community Services Activities <input type="checkbox"/> Renewable Energy Activities <input type="checkbox"/> Land Use and Forestry Activities/Risks & Capacities <input type="checkbox"/> N/A |
| Other Requirements applied | |
| Methodology (ies) applied and version number | Reduced Emissions from Cooking and Heating: TPDDTEC V 4.0 |
| Product Requirements applied | <input checked="" type="checkbox"/> GHG Emissions Reductions & Sequestration <input type="checkbox"/> Renewable Energy Label |

N/A

| Real case VPAs (all real case VPAs included in the PoA) | |
|---|-----|
| GS ID | TBC |
| GS0000 | |
| GS0000 | |
| GS0000 | |

SECTION A. General description of PoA

A.1. Purpose and general description of the PoA

More than 96% of the approximately 60 million people in Tanzania rely on biomass – mostly firewood and charcoal- as their primary fuel for cooking. Most rural households use the three stone fire place to cook their meals, whereas low quality charcoal cookstoves are used in urban and peri-urban households. Mean kitchen PM10 concentrations levels ($656 \mu\text{g}/\text{m}^3$) measured in Tanzanian homes during cooking far exceed globally tolerable limits for indoor pollution exposure (UNIDO, 2019). On a national level, the annual mortality rate attributed to indoor air pollution (IAP) is 139 every 100,000 deaths (World Bank, 2016). Due to the increasing demand on fuelwood, Tanzania lost 2.70Mha of tree cover between 2001 to 2020, equivalent to a 10% decrease in tree cover and 910Mt of CO₂e emissions since 2000.

A conference on clean cooking was held on 1-2 November 2022 in Tanzania¹. According to data published by the Rural Electrification Authority (REA) in 2020 in the conference, more than 90% of households in Tanzania use wood fuel for domestic purposes (cooking, water heating and space heating). On average, 64% use mainly wood while 26% use charcoal. It is mainly in rural areas that the highest use of wood fuel is concentrated, reaching almost the entire population.

In rural areas, almost all households use open fires or stoves with low thermal efficiency that dissipate significant amounts of energy during combustion for preparing meals, heating water and heating the home environment.

The widespread use of wood fuel and inefficient cooking and space heating methods has negative effects on several levels:

- On the environmental level, there are increasing levels of deforestation due to the clearing of natural forests by rural communities to procure firewood and to produce charcoal mainly for urban and peri-urban areas where the use of charcoal stoves is

¹ Report on the conference in Swahili "Taarifa ya Mjndala wa Kitaifa wa Nishati safi ya Kupikia 2022" will be provided to the VVB.

more widespread. In 2010, Tanzania had 24.7Mha of natural forests, covering 26% of its land area. From 2000 to 2021, Tanzania lost about 28,600 hectares of tree cover equivalent to 11% of its forests (Global Forest Watch). The collection of wood and the production of charcoal for domestic use is the second largest cause of deforestation after intensive agriculture. A study carried out by the Sokoine University of Agriculture in 2021 on the consumption of wood fuels in rural Tanzania for domestic use showed that on average each household uses about 6.7 kg of wood per day and 3.3 kg of charcoal per day.

- At the health level, the use of inefficient methods of cooking food leads to the release of substances harmful to health. According to data from the Tanzanian Ministry of Health, about 33,000 people a year in Tanzania die from respiratory problems related to the constant and prolonged inhalation of smoke from combustion generated by inefficient cooking systems. Women are the main victims of this problem, as they are responsible for cooking at the household level.

- At the economic level, the use of wood fuel has a significant direct and indirect impact on the family budget. Not all households in rural areas have easy access to forests to collect wood, so they have to buy wood or charcoal or both to provide for household consumption. Especially in the rainy season, the household budget allocated to fuel expenses increases because the availability of dry wood decreases. Studies of sample households in rural Tanzania by OffgridSun found that on average a household can spend between TZS 30,000 and TZS 60,000 per month, equivalent to 15%-20% of the household budget.

Indirect expenses include medical expenses related to the treatment of respiratory diseases and the time used to collect wood.

Among the indirect causes of the problem of high consumption of wood fuels for domestic use, the main ones are:

- Low levels of awareness among the population about climate change, its causes and consequences, and the negative environmental, health and economic impacts of wood fuel use.

- Low levels of accessibility for the population, especially in rural areas, of high thermal efficiency technologies for domestic use (clean cooking)

The national penetration of ICS in Tanzania is only 5% that is even lower in rural regions of the country. Lack of agents in rural remote areas, long distances and poor road conditions, lack of finance for the producers who are small scale artisans are among the reasons for the low penetration. In order to overcome those challenges, the proposed

Programme will distribute/ install cookstoves in rural Tanzania. The cookstoves will be sold at a subsidized affordable price to facilitate the access of the poorest families. Sensitization campaigns on clean cooking and environmental conservation will be also provided to the targeted communities. Local youth will be trained to become local agents to sell the cookstoves within the villages.

The programme aims to reach areas where no such activities are implemented previously. In case of interaction with other similar initiatives/programmes, the project stoves can be identified with their design and unique IDs.

A.2. Physical/ Geographical boundary of the PoA

United Republic of Tanzania

A.3. Technologies/measures and eligibility under Gold Standard

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Jiko Makini stove is made of metal with a ceramic liner inside. There are two handles on two sides and a metal top cover for the pot rest. A layer of sawdust and pumice mixture between the ceramic liner and metal outer surface provides high thermal efficiency. There is firewood intake door in the front and air intake at the back of the stove. The stove can be used by both firewood and charcoal. Thermal efficiencies are given for both fuel types in table below.

Stove specification

| Technical Specifications – Jiko Makini Stove | | |
|--|--|-------------------------------|
| Thermal efficiency (firewood) | | 30.6 % |
| Thermal efficiency (charcoal) | | 38.5% |
| Portability | | Portable |
| Design | | Single Pot |
| Stove Life | | 3 years |
| Size (stove) | | Width: 35 cm Height: 32 cm |

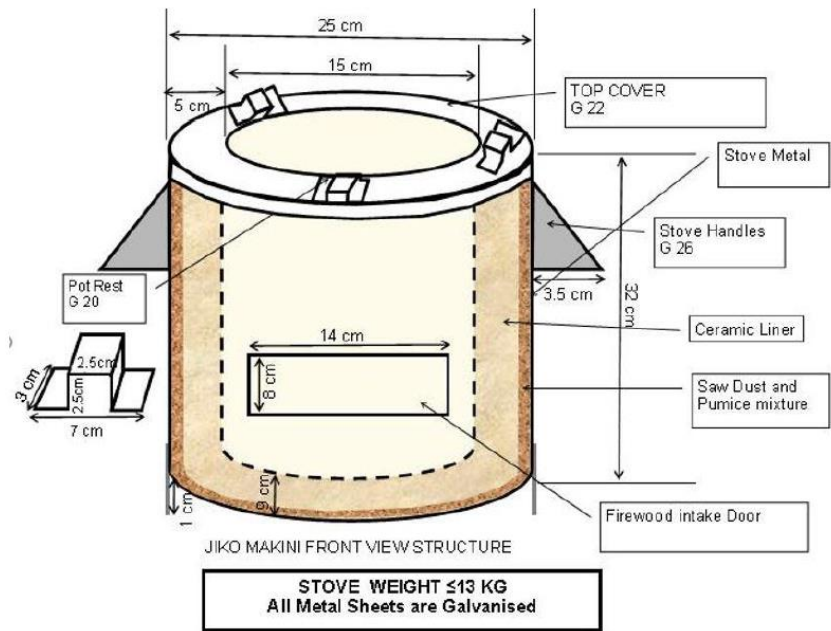


Figure.1. Jiko Makini Stove

The manufacturer is the Tanzanian company Envotec Services Limited, legally registered in Tanzania, which has experience in the production of cookstoves.

Eligibility under GS4GG:

As per 4.1.3 of Principles and Requirements, “ A Project type is automatically eligible for Gold Standard Certification if there are Gold Standard approved Activity Requirements and/or Impact Quantification Methodologies associated with it ..” The proposed PoA applies GS approved TPDDTEC methodology (v 4.0) and is among the pre-identified project types that is End use energy efficiency under 3.1.1 (b) of Community Services Activity Requirements (version 1.2).

| Eligibility Criteria-Principles and Requirements (V1.2) | | PoA’s compliance with eligibility Criteria |
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| 3.1.1 | General eligibility Criteria | |
| a | Should belong to pre-identified eligible project type as defined in section 4.1.3 of Principles and Requirements (V1.2) | The PoA is automatically eligible under Gold Standard as it falls under Community Activity Project Type and uses GS approved methodology ‘Technologies and Practices to Displace Decentralized Thermal Energy Consumption’ |

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| b | Location of the project should be defined in Design document. | Location of the project has been defined under Section A.2 of the present document and lies within the political boundaries of United Republic of Tanzania. |
| c | Requirement pertaining to Double counting- Project shall not be included in any other voluntary or compliance standards programme unless approved by Gold Standard. Also, if the Project Area overlaps with that of another Gold Standard or other voluntary or compliance standard programme of a similar nature, the project shall demonstrate that there is no double counting of impacts at design and performance certification (for example use of similar technology or practices through which the potential arises for double counting or misestimation of impacts amongst projects) | Each stove installed under the PoA will be registered by assigning a unique alpha numeric serial number along with GPS coordinates/address of the end user, his contact details and date of installation. Hence each project stove under the PoA can be identified uniquely thus eliminating any chance of being included in another PoA/project activity under any other carbon standard including Gold Standard. |
| d | Projects shall be in compliance with applicable Host Country's legal, environmental, ecological and social regulations. | Self-declaration by CME demonstrating the compliance of each VPA implemented under the present PoA with the host country's legal, environmental, ecological and social regulations shall be submitted to VVB. The VPAs will be registered at the National Carbon Monitoring Centre |

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| | | <p>which has been delegated by the Ministry of Environment to coordinate and manage all the carbon credits projects within the country according to the Law on Carbon Trading Finance which has been recently released.</p> |
| e | <p>Project Developer shall provide (i) name and (ii) contact details of all Project Participants; AND in case of an organization (iii) the legal registration details and (iv) documentation by the governing jurisdiction that proves that the entity is in good standing (defined as being a legal or other appropriate entity registered in or allowed to operate within the required jurisdiction and with no evidence of insolvency or legal/criminal notices placed against it or any of its Directors). Gold Standard retains the right (at its own discretion) to refuse use of the Standard where reputational concerns are highlighted.</p> | <p>The contact details of all project participants can be found in Appendix.1 attached to this document. OffgridSun is a registered company in Italy.</p> |
| f | <p>Full and uncontested legal ownership of carbon credits that are generated under Gold Standard Certification shall be demonstrated.</p> | <p>At the time of registration, the end user will be informed that carbon finance is being generated by the use of the project stove, and this finance is in turn used to improve the affordability of ICS and to promote the programme. The customer will</p> |

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| | | confirm via signature/thumb imprint that they are transferring rights to the VERs generated to the CME. |
| g | Project Developer shall also demonstrate where required uncontested legal rights and/or permissions concerning changes in use of other resources required to service the Project (for example, access rights, water rights etc.). | Improved Cookstove project does not require any changes in use of other resources to service the project. |
| h | All Project Developers applying for project activities located in a country named by the OECD Development Assistance Committee's shall declare the Official Development Assistance (ODA) support. | ODA declaration shall be submitted for each VPA. |
| 4.1.1 | Projects shall contribute positively to Climate Security & Sustainable Development. | By installing/distributing ICS, the PoA will result in reduction in fuel wood consumption leading to reduced GHG emission. |
| 4.1.12 | All Projects shall demonstrate a clear, direct contribution to sustainable development, defined as making demonstrable, positive impacts on at least three Sustainable Development Goals (SDGs), one of which must be SDG 13 | The PoA's contribution to sustainable development is detailed in Section A.4 below. |
| 4.1.13 | SDG Impacts shall be a primary effect – an intentional, direct effect of the | Direct SDG impacts of the programme include: |

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| | <p>project and shall not be 'one off' or an effect generated in design, construction, distribution, start-up or decommissioning of the Project.</p> | <ul style="list-style-type: none"> • SDG 13-avoided GHG emission on account of reduced fuelwood consumption • SDG 15-avoided deforestation on account of reduced fuelwood removal from adjoining forests • SDG 3-improved health owing to more efficient combustion of wood fuel resulting in less smoke and soot. • SDG 5-better time management of women and girls resulting from reduced need for wood fuel collection thereby making them available for other finance generating activities • SDG 8- as a result of the PoA, various jobs will be created resulting in economic upliftment of the local communities. • SDG 1-Households savings due to the reduced use of cooking fuel. |
| 4.1.14 | <p>The SDG Impacts shall be demonstrated as making a positive effect beyond what would reasonably be expected to occur in the Baseline Scenario</p> | <p>In absence of the project activity, none of the 6 SDG impacts mentioned above would be possible.</p> |
| 4.1.15 | <p>The Project shall identify the relevant monitoring indicators and/or monitoring parameters and define the monitoring approach in the Project Design Document.</p> | <p>Monitoring parameters and monitoring approach shall be defined in VPA design document.</p> |

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| 4.1.19 | Projects shall conduct a Safeguarding Principles Assessment | Safeguarding Principles Assessment shall be carried out at VPA level |
| Eligibility Criteria-Community Services Activity Requirements (V1.2) | | PoA's compliance with eligibility Criteria |
| 2.1.2 | All CSA Projects shall lead to climate change mitigation and/or adaptation by providing or improving access to services/resources at the household or community or institution level. | The PoA improves access to improved cookstove technology at highly subsidized rate to end user communities which are households. |
| 3.1.1 | Included in pre-identified CSA project type | The project activity belongs to end use energy efficiency category. |
| 3.1.2 | Project Area, Boundary and Scale shall be defined in line with the applicable Impact Quantification Methodologies and Product Requirements. | <p>As mentioned in the above sections, the project activity will be implemented within the political boundaries of Tanzania.</p> <p>Each project stove shall be identified using a combination of alpha numeric registration code, end user GPS position and contact details as well as installation date making it uniquely identifiable even if other projects of similar nature are implemented within the project boundary.</p> <p>It is a small-scale programme as defined by the Community Services Activity Requirement (version 1.2) and GHG Emissions Reduction & Sequestration Product Requirements. Total energy savings per year per VPA exceeds 180 GWh(th) limit of small scale.</p> |

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| <p>3.1.4</p> | <p>(a) Projects involving the distribution of a large number of devices for services such as heating, cooking, lighting, electricity generation, water treatment technology such as water filter, etc. shall provide a clear description of the ownership of the Products that are generated under Gold Standard Certification all along the investment chain. In line with the FPIC requirement, the proofs that end-users are aware of and willing to give up their rights on Products shall be provided.</p> <p>(b) The transfer of Product ownership shall be discussed during local stakeholder consultations for projects</p> | <p>(a) At the time of registration, the end user will be informed that carbon finance is being generated by the use of the project stove, and this finance is in turn used to improve the affordability of ICS and to promote the programme. The customer will confirm via signature/thumb imprint that they are transferring rights to the VERs generated to the CME.</p> <p>(b) The transfer of rights of carbon credits will be discussed during the explanation of how carbon finance would be used to support project implementation at the level of local stakeholder consultation.</p> |
| <p>4.1.8</p> | <p>All projects seeking the issuance of Certified Impact Statements and/or Products shall demonstrate Financial Additionality in accordance with the Principles & Requirements and the applicable Product requirements</p> | <p>In line with Section 4.1.9 of Gold Standard CSA Requirement, project activities implemented in LDCs are exempted from demonstrating financial additionality. As the PoA is being implemented in Tanzania, which is LDCs, it is auto additional. Also, it falls under the positive list which includes "Project activities solely composed of isolated units where the users of the technology/measure are households or communities or institutions and where each unit results in ≤ 600 MWh of energy</p> |

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| | | savings per year or <=600 tonnes of emission reductions per year. |
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A.4. Target/Indicator for each of the minimum three SDGs targeted by the PoA

SDGs assessment is conducted at the VPA level. CME shall provide the information in the VPA DD and may also summarize the outcome in the Table below.

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| Sustainable Development Goals Targeted | Most relevant SDG Target | SDG Impact Indicator (Selected in SDG tool) |
|--|--|--|
| 13 Climate Action (mandatory) | 13.2 Integrate climate change measures into national policies, strategies and planning | Amount of GHG emissions avoided or sequestered. |
| 15 Life on Land | 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 | Total non-renewable wood fuel saved. |
| 3 Good Health and Well-being | 3.9. By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water | Percentage of households that observed improvement in indoor air pollution |

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| | and soil pollution and contamination | |
| 5 Gender Equality | 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 and fuel collection |
| 8 Decent Work and Economic Growth | 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 | Total number of jobs |
| 1 No 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 household savings i.e., decrease in expenditure on basic service such cooking, lighting, drinking |

A.5. Coordinating/managing entity

Coordinating/ managing entity of the Programme is OffgridSun Srl.

A.6. Funding sources of PoA

The project will not receive any public funds.

SECTION B. MANAGEMENT SYSTEM AND INCLUSION CRITERIA

B.1. Management System

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The CME will have the overall responsibility of operational and management system of the PoA; which is described as follows:

i. Definitions of roles and responsibilities:

The CME will manage and coordinate activities of the VPA implementers and also provide necessary marketing and promotion assistance to the businesses. The CME will also coordinate the monitoring of the PoA and all the communications with the Gold Standard/ Sustain-Cert.

VPA Implementers will be appointed by the CME for the management and coordination of promotion and installation of ICS in host countries. They will be also responsible from monitoring activities once the implementation starts.

The CME will have an agreement with each VPA establishing roles and responsibilities including:

- Establishing its network for promotion and installation of ICS to the targeted households in rural communities.
- Collecting and recording the ICS as per the management and monitoring plan described.
- Informing the users that emission reductions will be owned by the CME.
- Organizing trainings for installation of stove parts and maintenance.
- Coordinating the monitoring activities of installed ICS.
- After sale services including maintenance and repair.
- Other activities assigned by the CME.

ii. Records of arrangements for training and capacity development for personnel

CME will maintain records of all personnel and arrange trainings for capacity building in order to accomplish the roles defined appointed during the implementation. Key training needs:

- Baseline survey: Perhaps the most important single variable in terms of quantifying VERs is the baseline fuel usage in households. The quality of the

survey is key in achieving an accurate baseline assessment. For this reason, the CME will provide guidance for interviewers to follow when conducting baseline fuel surveys in homes. This guidance outlines the questions and manner in which the interview should be conducted in order to get the most accurate estimate possible.

- Monitoring: Training, including that of field personnel, is needed to ensure monitoring activities are conducted effectively.
- ICS distribution: CME will provide training to distributors and promoters.

iii. A procedure for technical review of inclusion of VPAs

CME will review each VPA document and methodically go through each and every eligibility/applicability criterion of the PoA to ensure the VPA meets each requirement with certainty. In cases where there is doubt, the CME will not upload the VPA document until the requirements are met to the CME's satisfaction.

CME will ensure that all proposed VPAs' monitoring procedures conform with the monitoring requirements of the PoA, including stove efficiency testing and procedures such as visual inspection and KPT test to check that ICS are still in operation and at what efficiency.

During implementation of the VPA, and as necessary, the CME will ensure all procedures outlined in the PoA are being followed, particularly on stove registration and database updating.

iv. A procedure to avoid double counting

Each ICS included in the programme will be registered with the following information:

- A unique combination of user name, community/geographical location, distribution date linked with a unique serial number
- Contact details of the user will be registered with the serial number
- Each VPA will be cross-checked with other VPAs included in the programme as well as project activities registered in other carbon certification schemes.
- The users who have already an operating ICS will not be included in the programme.

v. Records and documentation control process for each VPA under the PoA

Each VPA will have an unique project database which will be maintained by the CME. All data will be securely backed up by the CME.

All of records will be collected electronically and stored directly in the monitoring database.

vi. Measures for continuous improvements of the PoA management system

The CME will undertake an annual review of the overall PoA management system, including identifying any problems with stove distribution, stove use once in the homes, monitoring continued stove use and overall database maintenance. This review will ensure that best practices are maintained through the lifetime of the PoA.

B.2. Application of methodologies

GS Methodology: Technologies and Practices to Displace Decentralized Thermal Energy Consumption” (TPDDTEC) Version 4.0 (07/10/2021) is applied for the PoA.

TPDDTEC (V4.0) methodology defines the following applicability criteria:

| 2.2.1. Applicability Criteria | Justification |
|--|---|
| a. Project shall choose a technology design that has predictable performance in that it is proven to be efficient and durable under field conditions; for cookstoves, the rated thermal efficiency shall be at least 20%. | The VPAs will include Jiko Makini stove that has 30.6% and 38.5% thermal efficiency for fuelwood and charcoal respectively. |
| b. The technology shall have continuous useful energy output of less than 150kW per unit. | The capacity of each stove will be below the 150kW limit. Please see the calculation below. |
| c. The project activity is implemented by a project developer and can include additional project participants. The individual households and institutions may be represented collectively by community organizations, etc., but do | Individual households and institutions are included collectively through VPAs and no household act as project participants. |

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| <p>not individually act as project participants.</p> | |
| <p>d. The project developer must design incentive mechanism(s), which should be effective as fast as possible, for the elimination of inefficient baseline stoves that are replaced by the project cooking devices and describe the incentive mechanism(s) in the PDD/VPA-DD at the time of validation.</p> | <p>All types of ICS will be distributed on non-commercial basis to promote the adoption of clean cooking technologies. Continued use of three stone fire will be monitored during annual/biennial surveys and the emissions related with the use will be accounted in the overall emission reduction amount. VPA Implementers will organize campaigns to make end-user aware about the benefits of continuous use of project technology and key product attributes.</p> |
| <p>e. To avoid double counting or double claiming, the project developer must:</p> <ol style="list-style-type: none"> 1) clearly communicate its ownership rights and intention of claiming the emission reductions resulting from the project activity to the following parties by contract or clear written assertions in the transaction paperwork: all other project participants; project technology manufacturers; and retailers of the project technology or the renewable fuel in use; and; 2) inform and notify the end users that they cannot claim emission reductions from the project, and; 3) exclude from the project activity, cooking devices included in any other voluntary market or CDM project activity/PoA, and strive not to displace the cooking devices of another CDM or voluntary project/PoA. | <p>Each user will be informed about the transfer of carbon rights and a carbon credit waiver agreement will be signed between CME and the user.</p> <p>The users who have already an operating ICS will not be included in the programme.</p> |

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| <p>f. Project activities making use of solid fossil fuel in the project scenario or other improved fossil fuel cookstoves meeting certain conditions may only claim emission reductions for energy efficiency improvement aspect and shall assume the same baseline and project fuel for emission reduction calculations.</p> | <p>Not Applicable</p> |
| <p>g. Project activities making use of a new solid biomass feedstock in the project situation (e.g. switch to green charcoal or renewable biomass briquettes) must comply with relevant specific requirements for biomass related project activities, as defined in the latest version of the Community Services Activity Requirements. The specific requirements apply to both plantations established for the project activity and/or existing plantations that will supply biomass feedstock.</p> | <p>Not Applicable</p> |
| <p>h. Adequate evidence is supplied to demonstrate that indoor air pollution (IAP) levels are not worsened compared to the baseline, and greenhouse gases emitted by the project fuel/stove combination are estimated with adequate precision.</p> | <p>Efficient cookstoves distributed by the Project lead to reduced indoor emissions and personal exposure to carbon monoxide (CO) and particles matter (PM2.5). This will be demonstrated through monitoring surveys by interviewing with users.</p> |
| <p>2.3. Safeguards</p> | <p>Justification</p> |
| <p>1. The project shall not undermine or conflict with any national, sub-national or local regulations or guidance for thermal energy supply or fuel supply or use. The project shall document the</p> | <p>The PoA complies with countries legal, environmental, ecological and social regulations of United Republic of Tanzania.</p> |

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| <p>national, regional and local regulatory framework for provision of thermal energy services of the type the project provides in the project boundary.</p> | |
| <p>2. If the expected technical life of the project technology is shorter than the crediting period, the project developer shall describe measures to ensure that end users are provided replacement technology of comparable or better technology or retrofitting essential parts with performance guarantee. If neither of the prior conditions can be demonstrated, no emission reductions can be claimed for the technology after its technical life has ended.</p> | <p>The project cook stoves has an average of 3 years of technical life. The Project Proponents will Check and replace the cookstoves that are end of their technical life or retrofit essential parts. If no replacement or repair occurs, those stoves will be deemed as ineligible for emission reductions.</p> |

Step 1: Estimate the energy consumption in kWh

$$B_{new} = B_{old,i,j} \times \left(\frac{n_{old}}{n_{new}}\right) = 11.3 \frac{kg}{day} \times \left(\frac{0.1}{0.30.6}\right) = 3.69 \frac{kg}{day}$$

$$TE = 0.00369 \frac{ton}{d} \times 0.0156 \frac{TJ}{ton} \times 277,778 \frac{kWh}{TJ} = 16 \text{ kWh/d}$$

Step 2: Estimate energy output:

Based on a survey done by World Bank for Sub-Saharan countries, households spend 3 hours on average for cooking². Accounting that 77%³ of cooking is done with the project stove, number of hours for the project stove is calculated as 2.31 in a day. Therefore; the capacity of stove is 16 kWh/2.31h= 6.93 kW.

Step 3: Estimate the useful thermal energy output:

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<https://openknowledge.worldbank.org/bitstream/handle/10986/22521/Clean0and0impr000a0landscape0report.pdf?sequence=1&isAllowed=y>
(Page:154)

³Monitoring report dated 13/08/3019 for CPAs of CDM PoA8060 states that 23% of the households uses a second stove at least once per week as per the baseline study conducted.

Assuming the thermal efficiency of the stove is 30.6%; the useful output will be 6.93 kW *0.345= 2.12 kW.

B.2.1. Multiple technologies/measures

N/A

B.3. Eligibility criteria for inclusion of a VPA in the PoA

| No. | Eligibility Criterion | Description/ Required condition | Means of Verification/Supporting evidence for inclusion |
|-----|--------------------------------------|---|--|
| 1 | Geographic boundary | Each VPA shall be located within the boundaries of the PoA. | ICS registry records |
| 2 | Double Counting | A unique numbering system will be adopted for each VPA. All ICS installed shall receive a unique number identifying to which VPA it belongs. | Each ICS included in the programme will be assigned to a VPA and will have a unique combination of customer name and geographical location linked with a unique serial number. |
| 3 | Exclusiveness of VPA | VPA shall not be previously: 1. Registered as a project activity with other offset schemes 2. Included as a VPA in any other registered PoA, or deregistered as a VPA of a PoA. | Confirmation by CME |
| 4 | Specification of Technology/ Measure | VPAs under the PoA shall distribute efficient ICS using firewood and charcoal. The capacity per unit is limited by 150kW as per the applied TPDDTEC methodology. | The type of stoves replaced and ICS implemented will be described in the specific VPA-DD. Baseline and project Kitchen Performance Tests will be carried out. |
| 5 | Start date | The start date of any proposed VPA will be on or after the start date of PoA. | The date on which first ICS distributed will be recorded. Sales invoice or end-user agreement will be provided as a proof. |

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| 6 | Applicability of methodologies | VPAs shall apply TPDDTEC (v 4.0). | The applicability of the methodology will be demonstrated at VPA level.(Section B.2 of VPA-DD) |
| 7 | Additionality | The additionality PoA is demonstrated as per GS4GG Community services activity requirements, Version 1.2 and GHG Emissions Reduction & Sequestration Product Requirements, Version 1.2. | Each VPA will be automatically additional when all evidences are provided: <ul style="list-style-type: none"> • The project is located in Tanzania • Total thermal energy savings per unit does not exceed the threshold of 1.8 GWh_{th}. |
| 8 | Public funding | Affirmation that there is no diversion of Official Development Assistance (ODA). | ODA declaration will be provided for each VPA. |
| 9 | Target group& Distribution Mechanism | Households will be the target group for VPAs. ICSs will be installed by local VPA Implementers on a non-commercial basis. | CME declaration or user registration. |
| 10 | Sampling requirements | All requirements as mentioned in TPDDEC, version 4.0 or the Standard: Sampling and surveys for CDM project activities and programme of activities are applicable to VPAs. | Specifications of the sampling methods will be defined at VPA-DDs. VPA Implementers shall follow the management system described at the PoA-DD. |
| 11 | Compliance of the technology implemented | The capacity of each ICS will comply with the requirements of TPDDTEC methodology. | VPAs will apply TPDDTEC (v4.0) (Section B.2 of the VPA-DD) |
| 12 | SDG Outcomes | Each VPA shall conduct SDG outcomes assessment and comply with the SDG targets identified in the PoA-DD. | VPA-DDs will include SDG outcomes assessment.(Section B.6 of the VPA-DD) |

| | | |
|-----------------------------|---|--|
| 13 Stakeholder Consultation | A local stakeholders' consultation meeting will be organized for Real Case VPA. | Local Stakeholder Consultation Meeting will be conducted for each country. |
| 14 VER Ownership | End users receiving ICSs under the specific VPA contractually cede their rights to claim and own emission reductions to the CME of the PoA. | End-user contract between CME and the user. |

SECTION C. DEMONSTRATION OF ADDITIONALITY

As per GS4GG Community services activity requirements, Version 1.2, Para 4.1.9: Projects that meet any of the following criteria are considered as deemed additional and therefore are not required to prove Financial Additionality at the time of Design Certification:

- (a) Positive list (Annex B of this document)
- (b) Projects located in LDC, SIDS, LLDC
- (c) Microscale projects

The proposed PoA is located in Tanzania; that fall under the category of LDC.

The project also complies with the requirement 1.1.3 of Annex B: Project activities solely composed of isolated units where the users of the technology/measure are households or communities or institutions and where each unit results in ≤ 600 MWh ($1.8 \text{ GWh}_{\text{th}}$) of energy savings per year or ≤ 600 tonnes of emission reductions per year. This will be demonstrated for each VPA separately.

SECTION D. DURATION OF PoA

D.1. Date of first submission of PoA to Gold Standard

21/02/2023

D.2. Duration of the PoA

20 years

SECTION E. OUTCOME OF PoA LEVEL STAKEHOLDER CONSULTATION

E.1. Summary of stakeholder consultation at PoA Level

The PoA Design Consultation is carried out electronically between 20/12/2022 and 20/01/2023 by inviting stakeholders from all categories. The stakeholders are also made aware of the live meeting to be held on January 20th 2023. The following documents were shared by the invitation:

- Non-technical summary of PoA
- Non-technical summary of VPA-1
- PoA Feedback form
- Agenda of the live meeting for VPA-1

No comments received.

E.2. Consideration of stakeholder comments received

The PoA design has not changed as no comments received for the PoA.

E.3. Final Continuous Input / Grievance Mechanism at PoA Level

>>

Final continuous input/grievance mechanism will be implemented at VPA level.

| Method | Include all details of Chosen Method (s) so that they may be understood and, where relevant, used by readers. |
|--|---|
| Continuous Input / Grievance Expression Process Book (mandatory) | |
| GS Contact (mandatory) | help@goldstandard.org |

Continuous Input / Grievance Expression Process Book (mandatory)

GS Contact (mandatory) help@goldstandard.org

Other

APPENDIX 1 - CONTACT INFORMATION OF COORDINATING/MANAGING ENTITY AND RESPONSIBLE PERSON(S)/ ENTITY(IES)

| | |
|---------------------------------------|---|
| CME and/or responsible person/ entity | <input checked="" type="checkbox"/> CME <input type="checkbox"/> Responsible person/ entity for application of the selected methodology(ies) and, where applicable, the selected standardized baseline(s) to the PoA |
| Organization | OffgridSun |
| Street/P.O. Box | Via Verdi 45 |
| Building | |
| City | Cittadella |
| State/Region | Padova |
| Postcode | 35013 |
| Country | Italy |
| Telephone | +39 049 738413 |
| E-mail | info@offgridsun.com |
| Website | www.offgridsun.com |
| Contact person | Valentina Quaranta |
| Title | Project Manager |
| Salutation | Ms. |
| Last name | Quaranta |
| Middle name | |
| First name | Valentina |
| Department | International Cooperation |
| Mobile | +39 3516142230 |
| Direct tel. | |
| Personal email | v.quaranta@offgridsun.com |

Revision History

| Version | Date | Remarks |
|---------|-----------------|---|
| 2.1 | 31 May 2022 | Editorial changes and revisions |
| 2.0 | 04 May 2022 | <p>Key Project Information table revised to cater for the following information:</p> <ul style="list-style-type: none"> - Scale of PoA - Title and GS ID of all real case VPAs included in the PoA <p>A new Management System section included Safeguarding Principles Assessment section removed Outcome of PoA Level Stakeholder Consultation section revised in the following manner:</p> <ul style="list-style-type: none"> - Justification for Stakeholder Consultation at PoA Level Only section removed <p>A new Consideration of Stakeholder Comments Received section added</p> |
| 1.1 | 14 October 2020 | <p>Hyperlinked section summary to enable quick access to key sections Improved clarity on Key Project Information Inclusion criteria table added Clarification on POA level LSC and Safeguard Principles Assessment Improved Clarity on SDG contribution/SDG Impact term used throughout Clarity on Stakeholder Consultation information required Provision of an accompanying Guide to help the user understand detailed rules and requirements</p> |
| 1.0 | 10 July 2017 | Initial adoption |