KEY PROJECT INFORMATION & VPA DESIGN DOCUMENT (PDD)

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VERSION **v. 1.1**

RELATED SUPPORT

– **TEMPLATE GUIDE Key Project Information & VPA Design Document v.1.1**

This document contains the following Sections

Key Project Information

KEY PROJECT INFORMATION

GS ID of Project	GS10987
Title of Project	GivePower Foundation Kenya Solar Water Farms (GS10987)
Time of First Submission Date	18:00
Date of Design Certification	
Version number of the VPA-DD	1
Completion date of version	08/02/2021
Coordinating/managing entity	CO2balance UK Ltd
VPA Implementer (s)	CO2balance UK Ltd
Project Participants and any communities involved	GivePower Foundation
Host Country (ies)	Kenya
GS ID and Title of applicable Design Certified VPA	
GS ID and Title of applicable Performance Certified VPA	
Activity Requirements applied	☒ Community Services Activities ☐ Renewable Energy Activities ☐ Land Use and Forestry Activities/Risks & Capacities ☐ N/A
Scale of the project activity	☐ Micro scale ☒ Small Scale ☐ Large Scale
Other Requirements applied	
Methodology (ies) applied and version number	TPDDTEC version 3.1.
Product Requirements applied	☐ GHG Emissions Reduction & Sequestration ☐ Renewable Energy Label ☒ N/A
Project Cycle:	☐ Regular ☒ Retroactive

Table 1 – Estimated Sustainable Development Contributions

Sustainable Development Goals Targeted	SDG Impact (defined inError! Reference source not found.)	Estimated Annual Average	Units or Products
13 Climate Action (mandatory)		72,900	tCO2e
3 Good Health and Well-being		TBD	TBD
5 Gender Equality		TBD	Hours
6 Clean Water and Sanitation		43,200-64,800	People

SECTION A. DESCRIPTION OF PROJECT

A.1. Purpose and general description of project

The Small-Scale VPA GivePower Foundation Kenya Solar Water Farms project is eligible under the Gold Standard methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 3.1. The project will support the provision of safe water using photovoltaic cells to power desalination technology to thousands of households in coastal Kenya. By providing safe water, the project will ensure that households consume less firewood and charcoal during the process of water purification and as a result there shall be a reduction of carbon dioxide emissions from the combustion process.

The project will aim to reach peri-urban to rural communities on the coast of Kenya. People's fuel use is typically related to their income and location with a typical mix between using wood fuel and charcoal on inefficient three stone fires and inefficient traditional charcoal stoves to purify drinking, cleaning and washing water. This process results in the release of greenhouse gas emissions from the combustion of fuels – this can be avoided if a technology that does not require fuel (wood or fossil) supplies clean water desired by households.

The communities involved in the project will all be low to middle income in areas with salty groundwater across coastal Kenya. Water access varies by community and income level, with a large market for unpotable water. This results in communities collecting water from unsafe sources such as rivers, streams, lakes, unprotected springs and open wells. The completion of the baseline study, before validation, will result in a more accurate understanding of baseline characteristics.

The number of desalination plants per VPA will be limited by the amount of pure water supplied by each unit; based on ex ante calculations, the maximum number of desalination plants that can be installed in one VPA to achieve 72,900 tCO2e is approximately 6-9 MAXI model solar desalination plants, depending on the fuels used in boiling water determined by the baseline study. However, the exact number will be determined once actual survey data has been collected. GivePower Foundation will install the solar desalination plants and deliver the maintenance programme for all the

desalination plants included in the project activity to ensure that the quality of the water delivered by the plants is fit for human consumption for the entire length of the project, which will be a minimum of 5 years.

GivePower Foundation have provided all upfront funding for the plants. Marketing of anticipated carbon credits from the emissions savings to ethical investors will ensure ongoing maintenance and operation of the technologies is possible while setting water prices at the necessary price point for local communities to benefit. GivePower Foundation have agreed to transfer the emissions reductions over to CO2balance UK Ltd. This project will be developed under the Gold Standard carbon credit body, which in addition to checking that the carbon credits from this project are real, also measures local social, environmental, and economic impact.

A.1.1. Eligibility of the project under approved PoA

The project is eligible under section 3.1.1 of the GS4GG Principles and Requirements as it follows an established Gold Standard methodology. Concerning point 3.1.1.5, the project does not support geoengineering or entail energy production from fossil fuels or nuclear. Rather it supports a switch away from polluting technologies to an emissions-free means of accessing safe water.

The project is eligible under the Gold Standard Methodology: Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 3.1. By providing safe water through the installation of solar desalination plants, the project will ensure that households consume less wood and fossil fuels by displacing the need to boil water for purification. This will result in a reduction of carbon dioxide emissions.

Further details on eligibility are provided in the table below:

No.	Eligibility Criterion	Description/ Required condition	Means of Verification/Supporting evidence for inclusion
1	VPA Location and Project Boundary	The geographical boundary within which the technologies are installed will be within the Project	The location of this VPA is specified in Section A.4, in which the CME states that the location is within Kenya; one of the

		Boundary outlined in Section A.4.4.	countries outlined in the PoA-DD. Each VPA will be uniquely defined by a range of GPS coordinates and current administrative maps to define the project boundary.
2	Scale of the Activity	The definition of small-scale is a project issuing emission reductions less than or equal to the maximum savings equivalent of 60GWh per year.	This VPA will be capped at an energy output of 60Gwh (180Gwhth) per year as per CDM small-scale requirements.
3	Technology and Target Group	The project will involve the installation and maintenance of solar desalination plants, to households and/or communities currently cooking with firewood and fossil fuels on traditional inefficient stove technologies, such as three-stone fires, for domestic purposes and/or currently boiling water as a treatment method before consumption.	This VPA will involve the installation of solar desalination plants that supply water to households currently boiling water as a treatment method (taking into account suppressed demand). Suppressed demand will be determined through a set of questions in the baseline survey that establish the method households use to purify their water, if any, and how they would choose to purify if they were not subject to monetary and access barriers.
4	Technology Output	The technologies will each have continuous energy outputs of less than 150kW per unit. This will be applied to the baseline technology with regards to the water technology units.	Calculations for the specific technology show that they are within the 150kW Limit. The estimated energy output of the baseline technology is 2.77 kW, however, following the installation of the desalination plant is 0 kW.
5	Baseline	The characteristics and current biomass/water consumption of households in the baseline scenario	The project will utilise default values provided in the methodology rather than carrying out a

		will be identified for each VPA.	modified Water Boiling Test (WBT).
6	Methodology	Each VPA will be in compliance with Gold Standard Methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 3.1.	The applicability of the methodology is justified in Section B.2 and applies to the VPA.
7	Additionality	Each VPA will demonstrate additionality according to the criteria outlined in the PoA-DD.	Additionality assessment is completed in Section B.5 of the PDD.
8	Carbon Transfer	It will be clearly communicated that CO2balance is the entity that is claiming ownership rights of and selling the emission reductions resulting from the project activity.	At the point of technology installation, a Carbon Transfer Form (CTF) will be signed and uploaded to our database stating that the rights to the carbon credits will lie with GivePower Foundation, in agreement with CO2balance UK Ltd to deliver the project. The plant manager from each installed desalination plant will sign a CTF on behalf of all users thereof.
9	Avoiding Double Counting of Emission Reductions	Each VPA will ensure double counting of emission reductions is avoided, through the unique identification of each technology with an identification number.	Each desalination plant installed in this POA will be GPS referenced ensuring that they are uniquely identifiable to this project.
10	Avoiding Double Counting of Programme Activities	Each VPA will show that it is exclusive to the PoA and not registered as another project activity or VPA under another PoA.	This VPA is neither registered as a project activity with GS or any other standard or as a VPA of another PoA. The appropriate registries (Gold Standard and CDM) can be accessed to demonstrate this.

A.1.2. Legal ownership of products generated by the project and legal rights to alter use of resources required to service the project

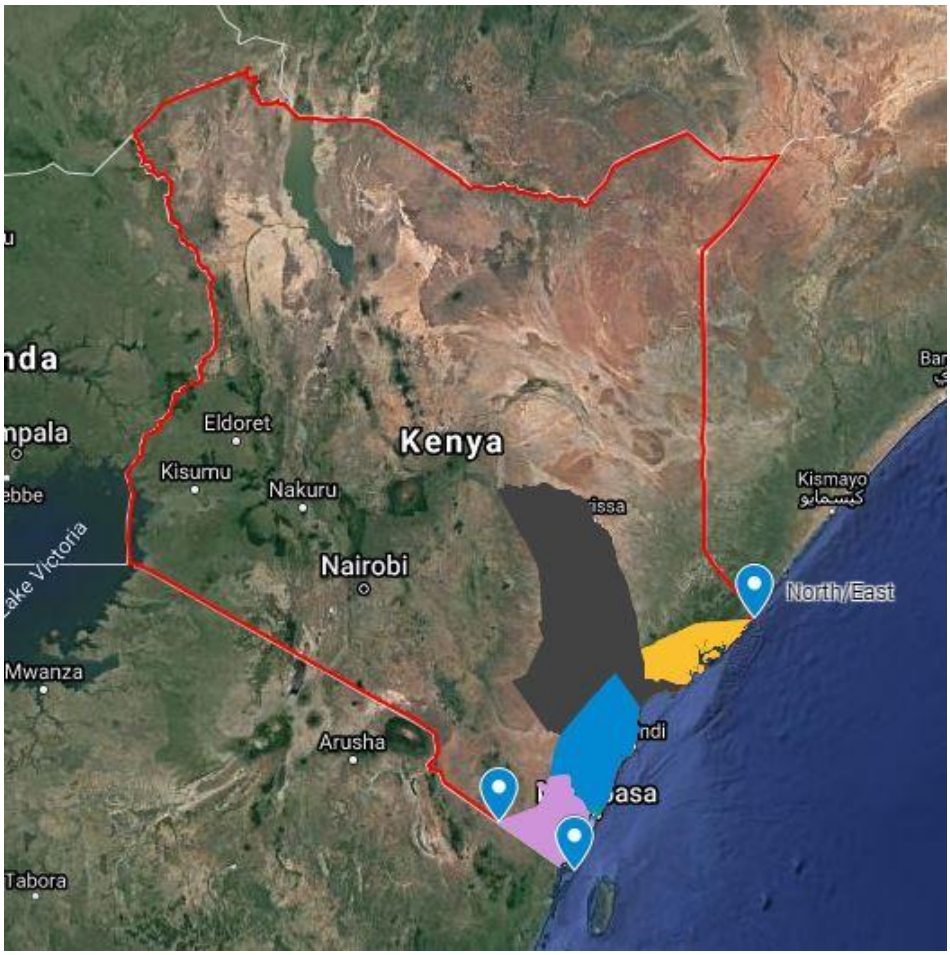
CO2balance UK Ltd is the Co-ordinating/Managing Entity which communicates with the Gold Standard; the project is managed in the Host Country by GivePower Foundation. In agreement with GivePower Foundation, CO2balance UK Ltd have legal ownership of the carbon credits produced as result of the project. Both parties maintain the right to operate the projects in the host country, Kenya. Solar Desalination Plants are managed by local GivePower Foundation employees, with plant managers in place at each solar desalination plant. Local communities are recognised as the main users of the desalination plants in the project. The project will ensure that it complies with the host countries' legal, environmental, ecological and social regulations. There are no disputes or contested rights that have been identified in relation to rights relevant to the project activity.

At the point of technology installation/repair, a Carbon Transfer Form (CTF) will be signed and uploaded to our database stating that the rights to the carbon credits will lie with GivePower Foundation, in agreement with CO2balance UK Ltd. An elected representative from each water resource committee responsible for a borehole will sign a CTF on behalf of all users thereof.

A.2. Location of project

Below are details of the physical location to allow unique identification of the project. The project boundary lies in the coastal region of Kenya, within which solar desalination plants could be installed. This project boundary is clearly indicated below. The target area and the fuel collection area are defined as being contained within the project boundary, with the outer limits of the project boundary being clearly defined below. As the majority of beneficiaries that collect or buy their wood fuel and charcoal do so locally, the wood fuel collection area and charcoal collection area and target area are considered the same.

To avoid double-counting, GPS coordinates for each desalination plant will be provided, recording their location, by first verification. Each desalination plant will be given a unique name and details of plant managers will be recorded in CO2balance's database to ensure ease of contact. This will act as a further mechanism to verify the unique identification of each plant.


Kenya
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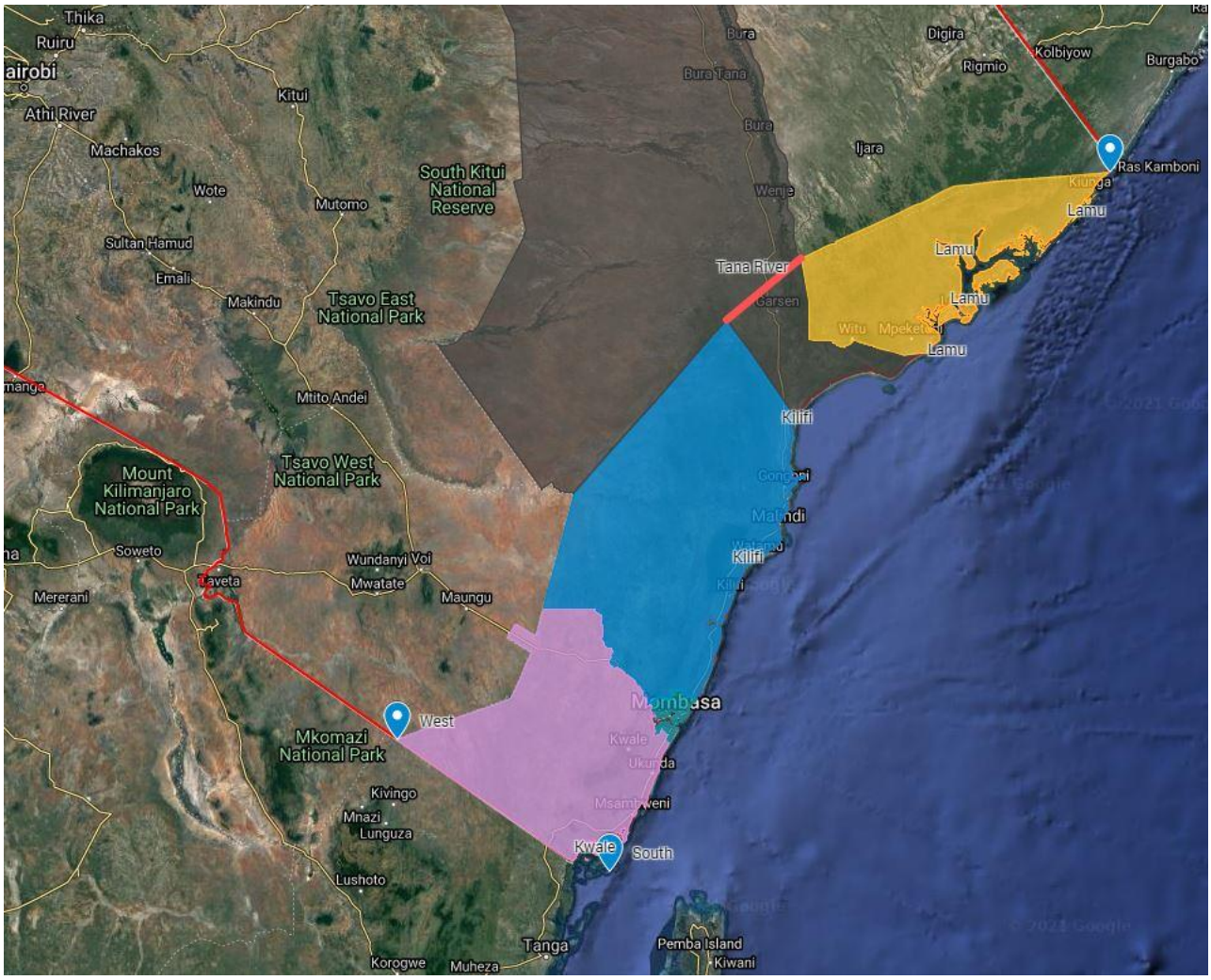
Mwanza
Arusha
Tabora
Kismayo
North/East



Note that only coastal regions of Tana River County are considered, in the image above this is shown by the red line splitting Tana River County between Kilifi and Lamu Counties.

Project Area Extremities		
	Latitude	Longitude
North	-1.65724	41.56197
South	-4.71569	39.37625
East	-1.65724	41.56197
West	-4.13784	38.44422

A.3. Technologies and/or measures

In this project, solar desalination plants are installed to deliver clean, safe water for human consumption contributing positively to SDG 6. The full baseline study is still

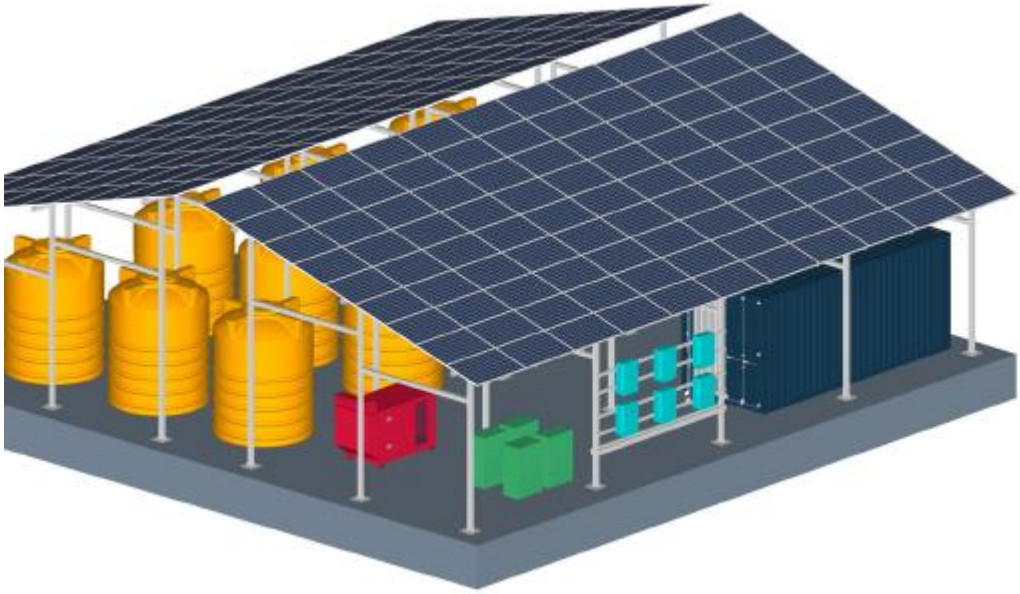
pending however initial scoping has indicated that communities where the plants are installed/proposed regularly consume unpotable brackish water.

A comprehensive maintenance programme is required in order to guarantee a consistent supply of pure water from the solar desalination plants that have been installed. Daily checklists are in place as standard practice. Also, the solar desalination plants contain consumable parts that require periodic replacement. All maintenance is conducted by trained local GivePower Foundation employees and will endure the activity of the project.

Following installment, it is predicted that women's time spent collecting and/or purchasing water and boiling fuels will be reduced, contributing positively to SDG 5. Furthermore, the provision of clean, safe water should displace the need to boil water for purification. This will achieve a reduction in GHG emissions and aligns with SDG 13.

Solar Desalination Plant Technology

GivePower Foundation have developed a revolutionary solar-powered clean water solution. The containerized MAXI solar-powered desalination units provide sustainable and scalable safe water supply.



Technical Specifications MAXI plant model:

Treatment Capacity (litres per day)	70,000
Water storage capacity (litres)	90,000
Operational Power requirements (kW of solar energy)	50
Energy storage capacity (kWh)	135
Energy cost per liter of water (Wh)	4
Targeted water consumption (litres per person per day)	10-15
Maximum targeted population to serve	20,000

A.4. Scale of the project

This VPA meets the relevant activity requirements for a small-scale project. Emission reductions achieved by the SS-VPA will be limited to a maximum reduction in energy consumption, on the supply and/or demand side, with a maximum output (i.e. maximum savings) of 60 GWh per year which is calculated equivalent to just over 72,900 tonnes of CO2e per year equivalent according to ex-ante estimations, under a wood-fuel only scenario. The mix of boiling fuels present in the baseline will be determined upon completion of baseline studies.

A.5. Funding sources of project

Upfront funding for the installation of the solar desalination plants comes internally from GivePower Foundation. There is no public or ODA funding for this project activity, all revenue for the project will be derived through the sale of water to consumers and from VERs.

SECTION B. APPLICATION OF APPROVED GOLD STANDARD METHODOLOGY (IES) AND/OR DEMONSTRATION OF SDG CONTRIBUTIONS

B.1. Reference of approved methodology (ies)

Gold Standard Methodology: Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 3.1.

B.2. Applicability of methodology (ies)

In accordance with the Gold Standard Methodology: Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 3.1, Small-scale VPAs listed in Mombasa County, Kenya, boundary adhere to the following conditions:

Methodology Requirement	**Project**
1. The project boundary can be clearly identified, and the technologies counted in the project are not included in another voluntary market or CDM project activity.	The project area (Mombasa County) has been clearly demarcated using political boundaries recognized in Kenya. Each technology will be recorded using GPS coordinates and individually tagged with an identification code which is stored securely in the project database. Regular project surveys together with distribution records will ensure that the technologies included in the project are not double counted.
2. Technologies have a continuous useful energy output of less than 150kW per unit (defined as total energy delivered usefully from start to end of operation of a unit divided by time of operation). For technologies or practices that do not deliver thermal energy in the project scenario but only displace thermal energy supplied in the baseline scenario, the 150kW threshold applies to the displaced baseline technology.	The project technology does not deliver thermal energy; the installation of solar desalination plants displace energy supplied in the baseline as they eliminate the need to purify water through boiling; the 150kw threshold therefore applies to the baseline technology. Solar desalination plants displace energy supplied in the baseline as they eliminate the need to purify water through boiling. Using default

	values for the BWBT, the estimated energy output is 2.77 kW which is well within the methodological limit of 150kW. This has been proven via calculation found in the Ex-ante excel.
3. The use of the baseline technology as a backup or auxiliary technology in parallel with the improved technology introduced by the project activity is permitted as long as a mechanism is put into place to encourage the removal of the old technology and the definitive discontinuity of its use.	As noted in the Gold Standard Methodology p.5. 'the removal and continued non-use of three stone fires and other easily constructed traditional devices (the baseline technology replaced by this project activity) is in many cases unlikely and impractical to monitor.' However, local people will be educated on the health and environmental benefits of abandoning inefficient use of the baseline technology. Furthermore, a WASH program will be carried out parallel to the project which will help to increase awareness regarding water use, health and hygiene among local communities. This education programme will act as a mechanism to encourage the removal of old technology.
a) The project documentation must provide a clear description of the approach chosen and the monitoring plan must allow for a good understanding of the extent to which the baseline technology is still in use after the introduction of the improved	Overall use of the baseline technology will be monitored in conjunction with that of the project technology, as will the emergence of any other baseline technology by targeted end users. As per the Methodology kitchen surveys will be carried out at regular intervals to

technology, whether the existing baseline technology is not surrendered at the time of the introduction of the improved technology, or whether a new baseline technology is acquired and put to use by targeted end users during the project crediting period.	determine any changes in baseline technology use. The baseline survey is yet to be completed but initial scoping activities indicate the majority of households in the targeted areas were using either a traditional wood fire to boil water which consists of a three-stone fire, or a traditional charcoal stove.
b)The success of the mechanism put into place must therefore be monitored, and the approach must be adjusted if proven unsuccessful. If an old technology remains in use in parallel with the improved technology, corresponding emissions must of course be accounted for as part of the project emissions.	Parallel baseline technology use (three stone fires or traditional equivalent) will be revealed during monitoring and its effect on emissions reductions will be captured in the parameter Q, p, clean boil, y and in the usage surveys. The uptake rate U will also be determined by surveys and hence used to account for parallel baseline and project technology use.
4. The project proponent must clearly communicate to all project participants the entity that is claiming ownership rights of and selling the emission reductions resulting from the project activity. This must be communicated to the technology producers and the retailers of the improved technology or the renewable fuel in use in the project situation by contract or clear written assertions in the transaction paperwork. If the claimants are not the project technology end users, the end users	A full explanation will be given to solar desalination plant managers that GivePower Foundation, in agreement with CO2balance UK Ltd, have committed to provide them with a solar desalination plant that is fully maintained using carbon finance revenues on the basis that the emissions reductions will be transferred to GivePower Foundation, in agreement with CO2balance UK Ltd. This will be recorded using a Carbon Transfer Form, which elected representatives of borehole owners will sign confirming that

should be notified that they cannot claim for emission reductions from the project.	they understand the agreement and will explain it to borehole users.
5. Project activities making use of a new biomass feedstock in the project situation (e.g. shift from non-renewable to green charcoal, plant oil or renewable biomass briquettes) must comply with relevant Gold Standard specific requirements for biomass related project activities, as defined in the latest version of the Gold Standard rules.	As the technology used in this project has been specifically designed to displace baseline feedstock use via fuelwood and charcoal, rather than a new biomass feedstock, this criterion is not applicable to this project. The emission reductions from this project will result from a change in quantity of fuel consumed, rather than change of fuel type.
a) Adequate evidence is supplied to demonstrate that indoor air pollution (IAP) levels are not worsened compared to the baseline, and greenhouse gases (as listed in section 2.1) emitted by the project fuel/stove combination are estimated with adequate precision. The project fuel/stove combination may include instances in which the project stove is a baseline stove.	The fuel used in both the project and baseline scenario is the same, as such there are no additional harmful gases released in the project scenario. The baseline technology has also not changed; rather its use for boiling will have been eliminated.
b) Records of renewable fuel sales may not be used as sole parameters for emission reduction calculation, but may be used as data informing the equations in section 2.0 of this methodology if correlated to data on distribution and results of field tests and surveys confirming (a) actual use of the renewable fuel and usage patterns such as average fraction of non-renewable	Renewable fuels are not sold as part of this project therefore this point is not applicable.

fuels used in mixed combustion or seasonal variation of fuel types, (b) GHG emissions, (c) evidence of CO levels not deteriorating (d) any further factors effecting emission reductions significantly.	

B.3. Project boundary

The physical boundary of the project is shown in section A.4.4 of this document.

Source		GHGs	Included?	Justification/Explanation
Baseline scenario	Combustion of wood fuel to boil water	CO_2	Yes	Important source of emissions
		CH_4	Yes	Important source of emissions
		N_2O	Yes	Gas included in the calculations. Emissions factors for fuel in stationary combustion by the IPCC
	Combustion of charcoal fuel to boil water	CO_2	Yes	Important source of emissions
		CH_4	Yes	Important source of emissions
		N_2O	Yes	Gas included in the calculations. Emissions factors for fuel in stationary combustion by the IPCC
Project scenario	Combustion of wood fuel to boil water	CO_2	Yes	Important source of emissions
		CH_4	Yes	Important source of emissions
		N_2O	Yes	Gas included in the calculations. Emissions factors for fuel in stationary combustion by the IPCC
	Combustion of charcoal fuel to boil water	CO_2	Yes	Important source of emissions
		CH_4	Yes	Important source of emissions
		N_2O	Yes	Gas included in the calculations. Emissions factors for fuel in stationary combustion by the IPCC

B.4. Establishment and description of baseline scenario

In Kenya, rural and peri-urban people typically use wood and charcoal fuels on inefficient traditional technologies, such as the three stone fire in the case of wood fuel, for cooking and water purification. This process results in the release of greenhouse gas emissions from the combustion of wood and charcoal. This can be avoided if a technology is used that is more efficient.

A large proportion of Kenyan nationals do not have access to safe water[1], many of whom depend on boiling as the only treatment method available or are forced to drink dirty water due to suppressed demand factors such as lack of access to fuel, time and financial resources.

CO2balance UK Ltd seeks to register this project as a Gold Standard small-scale project using the methodology "Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 3.1. In this project, GivePower Foundation, in agreement with CO2balance UK Ltd, will install solar desalination plants and manage them so that they deliver clean and safe water to local communities. The number of solar desalination plants per VPA will be limited by the amount of pure water supplied by each unit and the unit model (see Section A.3). Based on ex ante calculations, the maximum number of desalination plants that can be installed in one VPA to achieve 72,900 tCO2e is approximately between 6-9. However, the exact number will be determined once actual survey data has been collected. GivePower Foundation and CO2balance UK Ltd will install and deliver a maintenance programme for each solar desalination plant to ensure that the quality of the water delivered is fit for human consumption for the entire length of the project, which will be a minimum of 5 years.

The baseline situation is not expected to change significantly during the next years considering the current situation in Kenya, its economic development of the last years and predictions for the future. Kenya is a developing country (LMIDC) and is among the poorest countries in the world with a Human Development Index ranking of 147 out of 189 countries worldwide.

Baseline Scenario

The baseline scenario is assessed through use of:

- Baseline Project Survey
- Baseline Water Boiling Test (BWBT)

In accordance with the GS4GG Methodology "Technologies and Practices to Displace Decentralized Thermal Energy Consumption" (TPDDTEC), baseline surveys are carried out using representative and random sampling. The sample size is determined in line

[1] https://www.who.int/water_sanitation_health/publications/jmp-2019-full-report.pdf

with the methodological minimum sample size and confidence requirements. As the project technology is installed at the start of the project, the baseline scenario is considered fixed throughout the crediting period.

In order to fully understand the baseline scenario CO2balance UK Ltd will conduct a minimum of 100 Baseline Project Surveys across representative households in locations representative of the project area. Default values have been opted for rather than conducting a Baseline Water Boiling Test.

Baseline Project Survey:

In line with Gold Standard requirements the Baseline Project Survey will provide critical information on target population characteristics, water and fuel consumption needed to purify water, suppressed demand and leakage. According to the relevant Gold Standard methodology the following information will be captured in the surveys:

- Address or location
- Telephone number (where possible)
- Number of people served by baseline technology(ies)
- Typical baseline technology usage patterns and tasks (commercial, institutional, domestic etc)
- Types of baseline technology used and estimated frequency
- Types of fuels used and estimated quantities
- Seasonal variations in baseline technology and fuel use
- Sources of fuels and prices paid or effort made to collect fuels

Suppressed Demand:

The baseline scenario will be assessed in terms of suppressed demand. Suppressed demand is determined through a set of questions in the Baseline Project Survey that establish the method households use to purify their water, if any, and how they would choose to purify if they were not subject to monetary and access barriers.

Baseline Water Boiling Test:

Default values shall be used in place of the BWBT, in accordance with TPDDTEC v3.1. The default values for wood fuel and charcoal are as follows:

Fuel Type	Value	Unit
Wood Fuel	0.4	Kg/L
Charcoal	0.1	Kg/L

A baseline study has not yet been conducted prior to Preliminary Review. The baseline study will be completed prior to validation of the project.

B.5. Demonstration of additionality

Specify the methodology, activity requirement or product requirement that establishes deemed additionality for the proposed project (including the version number and the specific paragraph, if applicable).	As demonstrated in the Gold Standard for the Global Goals Community Services Activity Requirements section 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: 1. (a) Positive list (Annex B) 2. (b) Projects located in LDC, SIDS, LLDC 3. (c) Micro-scale projects
Describe how the proposed project meets the criteria for deemed additionality.	Additionality is demonstrated using the UNFCCC Tool for the demonstration and assessment of additionality (Version 7) which shows that the project would not be possible without VER revenues. Steps 0, 1,3 and 4 will be applied. **Step 0: First of its kind project activities. Is the proposed project activity the first-of-its-kind?** **Outcome of step 0:** This step is optional. If it is not applied it shall be considered that the proposed project activity is not the first-of-its-kind (paragraph 14). **Step 1: Identification of alternatives to the project activity consistent with current laws and regulations.** ***Sub-step 1a: define alternatives to the project activity:*** **Alternative 1:** Solar desalination plants are installed without registering as a Gold Standard VER project. *Under this alternative scenario, the project would proceed as laid out in this document. This would provide the same displacement of thermal energy, result in the biomass savings, improved livelihoods*

	and other contributions to sustainable development identified. **Alternative 2:** The distribution of chlorine tablets for the treatment of unsafe water. *Under the alternative scenario, the project would not occur as described in the document and instead, chlorine tablets would be distributed for the treatment of water collected form unsafe sources. However, this would not resolve the issue of salinity in drinking water. This approach would provide displacement of thermal energy and result in biomass savings for the beneficiaries.* **Alternative 3:** Continuation of the current situation – use of boiling to purify water on traditional cooking technologies; three stone fires or traditional charcoal stoves. *Without the intervention of the project and use of carbon finance it is unlikely that the status quo will change.* **Outcome of sub-step 1a:** Three realistic and credible alternatives to the project activity have been identified. ***Sub-step 1b: Consistency with mandatory laws and regulatory*** The alternatives identified in Sub-step 1a above are in compliance with the mandatory laws and regulations in Kenya. **Outcome of sub-step 1b:** Three realistic and credible alternative scenarios to the project activity that are in compliance with mandatory legislation and regulations, taking into account the enforcement in the region and national and/or sectoral policies and regulations. **Step 3: Barrier Analysis**

Sub-step 3a: Identify barriers that would prevent the implementation of the proposed GS VER project activity:

a. Investment barrier

A solar desalination plant costs roughly $500,000 to install. This is a significant upfront cost and falls outside the scope of the majority of public and private sector entities in Kenya, especially without revenues generated from GS VERs.

GivePower Foundation are the only organisation to have installed solar desalination plants in Kenya, to date, using grant funding and/or non-commercial finance terms. Carbon revenues are required to fund the ongoing operation and maintenance of the solar desalination plants which would break down without regular upkeep.

b. Technological barrier

Solar desalination plant technology is currently not in use in the region surrounding and including the project area.

Outcome of sub-step 3a: Barriers have been identified that may prevent one or more alternative scenarios to occur.

Sub-step 3b: Show that the identified barriers would not prevent the implementation of at least one of the alternatives (except the proposed project activity):

Due to the investment needed to provide chlorination tablets in the 'Alternative 2' scenario identified in sub-step 1a, this scenario would also be prevented from occurring by the barriers identified in sub-step 3a and has been eliminated from consideration.

	'Alternative 3' is not affected by any of the barriers identified in sub-step 3a. **Outcome of step 3:** Both sub-steps 3a – 3b are satisfied. **Step 4: Common practice analysis** **Sub-step 4b: The proposed project activity(ies) does not apply any of the measures that are listed in the definitions section [in the CDM Tool for the demonstration and assessment of additionality]:** There is one similar project, also developed by GivePower Foundation. A solar desalination project has been established in Kiunga, Kenya. This project is not in close proximity to the proposed and there are no further solar desalination projects intended. In addition, it is unlikely local government funding prioritises the installation of solar desalination plants to meet people's needs for clean and safe water. **Outcome of step 4:** Project is considered additional.

B.5.1. Prior Consideration

CO2balance UK Ltd and GivePower Foundation first held discussions regarding carbon financing of solar desalination plant technology in February 2020. Discussions originally held were focused on certifying 2 MAXI model desalination plants in Mombasa County. However, carbon project development was delayed as a result of the ongoing grievance into safe water methodologies. This delay was to ensure that the project would be viable under the new methodological requirements and caps.

B.5.2. Ongoing Financial Need

N/A

B.6. Sustainable Development Goals (SDG) outcomes

Relevant Target/Indicator for each of the three SDGs

Sustainable Development Goals Targeted	Most relevant SDG Target	SDG Impact Indicator (Proposed or SDG Indicator)
SDG 3 – Good Health and Well-being	3.9 – By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.	To be determined by results of baseline survey and amount of suppressed demand in the project area
SDG 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.	5.4.1 -Proportion of time spent on unpaid domestic and care work, by sex, age and location
SDG 6 - Clean Water and Sanitation	6.1 – By 2030, achieve universal and equitable access to safe and affordable drinking water for all.	6.1.1 - Proportion of population using safely managed drinking water services
SDG 13 - Climate Action	13.B – Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities.	13.B.1 - Number of least developed countries and small island developing States that are receiving specialized support, and amount of support, including finance, technology and capacity-building, for mechanisms for raising capacities for

		effective climate change-related planning and management, including focusing on women, youth and local and marginalized communities

B.6.1. Explanation of methodological choices/approaches for estimating the SDG Impact

Outcomes for SDG 3 (Good Health and Wellbeing)

The proposed SDG impact methodology and indicator will be based on outcome of baseline monitoring that has not yet been finalised. Final version to be provided in time for validation.

Outcomes for SDG 5 (Gender Equality) are calculated as follows:

Women and girls perform the majority of unpaid domestic work[2]. This leaves them with less time to rest, study and realise their economic potential, leaving them in time poverty. In regard to time, women are poorer than men as unpaid domestic duties, such as collecting firewood and water, must be added to their market productive work, making time much scarcer[3]. Women are widely recognised as being principally responsible for natural resource collection[4].

These trends demonstrate that reducing the amount of firewood required by households has the potential to reduce the time poverty of women, because the time burden of collecting firewood, which falls disproportionately on women, will be reduced. The decrease per household in time spent gathering firewood will be taken as a proxy contribution towards the SDG target.

[2] UN (2017) 'Progress towards the Sustainable Development Goals (E/2017/66)'. Available at https://unstats.un.org/sdgs/files/report/2017/secretary-general-sdg-report-2017--EN.pdf

[3] Charmes, J 'A Review of Empirical Evidence on Time Use in Africa from UN-Sponsored Surveys', in Word Bank (2006) 'Gender, Times Use, and Poverty in Sub-Saharan Africa'. World Bank Working Paper No. 73

[4] Nankhuni (2004) 'Environmental Degradation, Resource Scarcity and Children's Welfare in Malawi: School Attendance, School Progress, and Children's Health'

The overall reduction in time spent collecting firewood by the project activity are then calculated as follows:

TRy = Tb,y - Tp,y

Where:

TRy Total reduction time spent collecting firewood for project activity in year y (hours)

Tb,y Baseline time spent collecting firewood per household per day (hours)

Tp,y Project time spent collecting firewood per household per day (hours)

Outcomes for SDG 6 (Clean Water and Sanitation) are calculated as follows:

The outcome for SDG 6 is quantified as the additional number of persons having access to safe water in the project activity compared to the baseline scenario (P_{access}). The number of persons using each solar desalination plant is determined in the sensitization process during the installation. The percentage of users who already had access to a safe water source will be determined through the baseline survey. Calculations are as follows (parameters from sections B.6.3 and B.7.1 of the VPA-DD will be applied):

$$P_{access} = P_y * (1 - C_j) * U_{p,y}$$

Where:

P_{access} Number of additional persons having access to safe water in the project activity compared to the baseline scenario.

P_y Number of persons having access to safe water in the project activity.

C_j Expressed as a percentage, the portion of users of the project technology j who in the baseline were already consuming safe water without boiling it.

$U_{p,y}$ Usage rate in project scenario p during year y

Outcomes for SDG 13 (Climate Action) are calculated as follows:

The outcome for SDG 13 (Climate Action), GHG emission reductions, is calculated using the parameters in Section B.6.2 in the VPA-DD.

Baseline emissions

$$BE_{b,y} = B_{b,y} * \left(\left(fNRB_y * EF_{b,fuel,co2}\right) + EF_{b,fuel,nonco2}\right) * NCV_{b,fuel}$$

Where:

$BE_{b,y}$ Emissions for baseline scenario b during the year y in tCO_2e

$B_{b,y}$ Quantity of fuel consumed in baseline scenario b during year y, in tons, as per by-default factors

$fNRB_y$ Fraction of biomass used during year y for the considered scenario that can be established as non-renewable biomass

$NCV_{b,fuel}$ Net calorific value of the fuel that is substituted or reduced (IPCC default for wood fuel, 0.0156 TJ/ton)

$EF_{b,fuel,co2}$ CO2 emission factor of the fuel that is substituted or reduced. 112 tCO2/TJ for Wood/Wood Waste

$EF_{b,fuel,nonco2}$ Non-CO2 emission factor of the fuel that is substituted or reduced

Project emissions

$$PE_{p,y} = B_{p,y} * \left(\left(fNRB_y * EF_{p,fuel,co2} \right) + EF_{p,fuel,nonco2} \right) * NCV_{p,fuel}$$

Where:

$PE_{p,y}$ Emissions for project scenario p during the year y in tCO_2e

$B_{p,y}$ Quantity of fuel consumed in project scenario p during year y, in tons, as derived from the statistical analysis conducted on the data collected during the project performance field tests (cases when no baseline performance field test are performed, e.g. by-default baseline factors)

$fNRB_{,y}$ Fraction of biomass used during year y for the consid ered scenario that can be established as non-renewable biomass

$NCV_{p,fuel}$ Net calorific value of the project fuel (IPCC default for wood fuel, 0.0156 TJ/ton). This is equal to the baseline fuel NCV in projects which use the same fuel

$EF_{p,fuel,co2}$ CO2 emission factor of the project fuel. This is equal to the baseline fuel EF in projects which use the same fuel, 112 tCO2/TJ for Wood/Wood Waste

$EF_{p,fuel,nonco2}$ Non-CO2 emission factor of the project fuel. This is equal to the baseline fuel EF in projects which use the same fuel

Where:

$$B_{p,y} = \left(1 - C_j\right) * N_{p,y} * W_{b,y} * \left(Q_{p,rawboil,y} + Q_{p,cleanboil,y}\right)$$

C_j Expressed as a percentage, the portion of users of the project technology j who in the baseline were already consuming safe water without boiling it.

$N_{p,y}$ Project technology-days in the project database for project scenario p through year y

$W_{b,y}$ Quantity of wood fuel or fossil fuel required to boil 1 litre of water using technologies representative of baseline scenario b during year y

$Q_{p,rawboil,y}$ Quantity of raw water boiled in the project scenario p per person per day

$Q_{p,cleanboil,y}$ Quantity of safe water boiled in the project scenario p per person per day

$$ER_y = \left(\left((\Sigma BE_{b,y} - \Sigma PE_{p,y}\right) * Up,y\right) - LEp,y\ ) * (1 - XBoil)$$

Where:

LEp,y Leakage for project scenario p in year y (tCO_2e)

Up,y Cumulative usage rate for technologies in project scenario p in year y, based on culmulative adoption rate and drop off rate evealed by usage surveys (fraction)

$XBoil$ Percentage of premises that would have used other non-GHG emitting technologies like chlorine treatment techniques, if available, in the absence of the project activity

B.6.2. Data and parameters fixed ex ante

SDG13

Data/parameter	$EF_{b,co2}$
Unit	tCO_2/TJ
Description	CO_2 emission factor arising from use of wood fuel in baseline scenario

Source of data	Calculated from IPCC defaults; Volume 2: 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Chapter 2, Table 2.5
Value(s) applied	112 – see GS Methodology
Choice of data or Measurement methods and procedures	Deemed valid by Methodology
Purpose of data	Calculation of baseline emissions
Additional comment	-

Data/parameter	$EF_{b,co2}$ Charcoal
Unit	tCO_2/TJ
Description	CO_2 emission factor arising from use of charcoal in baseline scenario
Source of data	Calculated from IPCC defaults; Volume 2: 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Chapter 2, Table 2.5
Value(s) applied	336 – see GS Methodology
Choice of data or Measurement methods and procedures	Deemed valid by Methodology
Purpose of data	Calculation of baseline emissions
Additional comment	A wood to charcoal ratio of 3 has been applied, in line with IPCC guidelines: https://www.ipcc-nggip.iges.or.jp/public/gl/guidelin/ch1ref3.pdf page 1.46

Data/parameter	$EF_{b,non\ co2}$
Unit	tCO_2e/TJ

Description	Non-CO_2 (CH_4 and N_2O) emission factor arising from use of wood fuel in baseline scenario
Source of data	IPCC Default emissions factor
Value(s) applied	9.460
Choice of data or Measurement methods and procedures	Deemed valid by Methodology

Gas	Default Emissions factor (kg_gas/TJ $_{NCV}$)	GWP of gas	Default Emissions factor (kg_CO_2e/TJ $_{NCV}$)	Default Emissions factor (t_CO_2e/TJ $_{NCV}$)
CH_4	300	28	8,400	8.4000
N_2O	4	265	1,060	1.060
			Total	**9.460**

Purpose of data	Calculation of emission reductions
Additional comment	For charcoal, a wood to charcoal ratio of 3 has been applied, in line with IPCC guidelines: https://www.ipcc-nggip.iges.or.jp/public/gl/guidelin/ch1ref3.pdf page 1.46

Data/parameter	$EF_{b,non\ co2}$ Charcoal
Unit	tCO_2e/TJ
Description	Non-CO_2 (CH_4 and N_2O) emission factor arising from use of charcoal in baseline scenario
Source of data	IPCC Default emissions factor
Value(s) applied	28.380
Choice of data or Measurement methods and procedures	Deemed valid by Methodology Wood fuel values:

	<table><tr><th>Gas</th><th>Default Emissions factor (kg_gas/TJ NCV)</th><th>GWP of gas</th><th>Default Emissions factor (kg_CO_2e/TJ NCV)</th><th>Default Emissions factor (t_CO_2e/TJ NCV)</th></tr><tr><td>CH_4</td><td>300</td><td>28</td><td>8,400</td><td>8.4000</td></tr><tr><td>N_2O</td><td>4</td><td>265</td><td>1,060</td><td>1.060</td></tr><tr><td></td><td></td><td></td><td>Total</td><td>9.460</td></tr></table>
Purpose of data	Calculation of emission reductions
Additional comment	For charcoal, a wood to charcoal ratio of 3 has been applied, in line with IPCC guidelines: https://www.ipcc-nggip.iges.or.jp/public/gl/guidelin/ch1ref3.pdf page 1.46

Data/parameter	$EF_{p,co2}$
Unit	tCO_2/TJ
Description	CO_2 emission factor arising from use of wood fuel in project scenario
Source of data	Volume 2: 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Chapter 2, Table 2.5
Value(s) applied	112
Choice of data or Measurement methods and procedures	Deemed valid by Methodology
Purpose of data	Calculation of emission reductions
Additional comment	-

Data/parameter	$EF_{p,co2}$ Charcoal

Unit	tCO_2/TJ
Description	CO_2 emission factor arising from use of charcoal in project scenario
Source of data	Volume 2: 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Chapter 2, Table 2.5
Value(s) applied	336
Choice of data or Measurement methods and procedures	Deemed valid by Methodology
Purpose of data	Calculation of emission reductions
Additional comment	For charcoal, a wood to charcoal ratio of 3 has been applied, in line with IPCC guidelines: https://www.ipcc-nggip.iges.or.jp/public/gl/guidelin/ch1ref3.pdf page 1.46

Data/parameter	$EF_{p,non\ co2}$
Unit	tCO_2e/TJ
Description	Non-CO_2 (CH_4 and N_2O) emission factor arising from use of wood fuel in project scenario
Source of data	IPCC Default emissions factor
Value(s) applied	9.460
Choice of data or Measurement methods and procedures	Deemed valid by Methodology

Gas	Default Emissions factor (kg_gas/TJ_{NCV})	GWP of gas	Default Emissions factor (kg_CO_2e/TJ_{NCV})	Default Emissions factor (t_CO_2e/TJ_{NCV})
CH_4	300	28	8,400	8.4000
N_2O	4	265	1,060	1.060

				Total	**9.460**
Purpose of data	Calculation of emission reductions				
Additional comment	-				

Data/parameter	$EF_{p,non\ co2}$ Charcoal				
Unit	tCO_2e/TJ				
Description	Non-CO_2 (CH_4 and N_2O) emission factor arising from use of charcoal in project scenario				
Source of data	IPCC Default emissions factor				
Value(s) applied	28.380 (using wood to charcoal ratio)				
Choice of data or Measurement methods and procedures	Deemed valid by Methodology Wood fuel values:				
	Gas	Default Emissions factor (kg_gas/TJ_{NCV})	GWP of gas	Default Emissions factor (kg_CO_2e/TJ_{NCV})	Default Emissions factor (t_CO_2e/TJ_{NCV})
	CH_4	300	28	8,400	8.4000
	N_2O	4	265	1,060	1.060
				Total	**9.460**
Purpose of data	Calculation of emission reductions				
Additional comment	For charcoal, a wood to charcoal ratio of 3 has been applied, in line with IPCC guidelines: https://www.ipcc-nggip.iges.or.jp/public/gl/guidelin/ch1ref3.pdf page 1.46				

Data/parameter	NCV_b

Unit	TJ/ton
Description	Net calorific value of the wood fuel used in the baseline
Source of data	IPCC Default emissions factor
Value(s) applied	0.0156
Choice of data or Measurement methods and procedures	Deemed valid by Methodology
Purpose of data	Calculation of emission reductions
Additional comment	-

Data/parameter	NCV_b Charcoal
Unit	TJ/ton
Description	Net calorific value of the charcoal used in the baseline
Source of data	IPCC Default emissions factor
Value(s) applied	0.0295
Choice of data or Measurement methods and procedures	Deemed valid by Methodology
Purpose of data	Calculation of emission reductions
Additional comment	-

Data/parameter	NCV_p
Unit	TJ/ton
Description	Net calorific value of the wood fuel used in the project
Source of data	IPCC Default emissions factor

Value(s) applied	0.0156
Choice of data or Measurement methods and procedures	Deemed valid by Methodology
Purpose of data	Calculation of emission reductions
Additional comment	-

Data/parameter	NCV_p Charcoal
Unit	TJ/ton
Description	Net calorific value of the charcoal used in the project
Source of data	IPCC Default emissions factor
Value(s) applied	0.0295
Choice of data or Measurement methods and procedures	Deemed valid by Methodology
Purpose of data	Calculation of emission reductions
Additional comment	-

Data/parameter	$f_{NRB,i,y}$
Unit	Fractional non-renewability
Description	Non-renewability status of woody biomass fuel in scenario i during year y
Source of data	CDM Default stated in following document: https://cdm.unfccc.int/Panels/ssc_wg/meetings/037/ssc_37_an14.pdf

Value(s) applied	0.92
Choice of data or Measurement methods and procedures	Default values of fraction of non-renewable biomass as outlined by the UNFCCC CDM in EB 67, Annex 22 and confirmed by DNA. https://cdm.unfccc.int/Reference/Notes/meth/meth_note12.pdf
Purpose of data	Calculation of emission reductions
Additional comment	The UNFCCC default fNRB expired on 18th September 2017 however, the value is also in line with the recently published report from the Ministry of Environment and Forestry in Kenya - National Climate Change Action Plan 2018-2022 (Vol 1)[5], see page 40.

Data/parameter	$W_{b,y}$
Unit	T/litre
Description	Quantity of wood fuel that is used to treat 1 litre of water in the baseline scenario b during year y
Source of data	Default value
Value(s) applied	0.0004
Choice of data or Measurement methods and procedures	Default values as per TPDDTEC v3.1 will be used rather than conducting a full baseline water boiling test
Purpose of data	Calculation of emission reductions
Additional comment	-

[5] http://www.kenyamarkets.org/wp-content/uploads/2019/02/NCCAP-2018-2022-Online-.pdf

Data/parameter	$W_{p,y}$
Unit	T/litre
Description	Quantity of wood fuel that is used to treat 1 litre of water in the project scenario b during year y
Source of data	Default value
Value(s) applied	0.0004
Choice of data or Measurement methods and procedures	Default values as per TPDDTEC v3.1 will be used rather than conducting a full baseline water boiling test
Purpose of data	Calculation of emission reductions
Additional comment	-

Data/parameter	$W_{b,y}$ Charcoal
Unit	T/litre
Description	Quantity of charcoal that is used to treat 1 litre of water in the baseline scenario b during year y
Source of data	Default value
Value(s) applied	0.0001
Choice of data or Measurement methods and procedures	Default values as per TPDDTEC v3.1 will be used rather than conducting a full baseline water boiling test
Purpose of data	Calculation of emission reductions
Additional comment	-

Data/parameter	$W_{p,y}$ Charcoal
Unit	T/litre

Description	Quantity of charcoal that is used to treat 1 litre of water in the project scenario b during year y
Source of data	Default value
Value(s) applied	0.0001
Choice of data or Measurement methods and procedures	Default values as per TPDDTEC v3.1 will be used rather than conducting a full baseline water boiling test
Purpose of data	Calculation of emission reductions
Additional comment	-

Data/parameter	Cj
Unit	Percentage
Description	Portion of users of project safe water supply who were already in baseline using a non-boiling safe water supply
Source of data	Baseline Study
Value(s) applied	To be determined
Choice of data or Measurement methods and procedures	Deemed valid by Methodology
Purpose of data	Calculation of emission reductions
Additional comment	-

Data/parameter	Xboil Non-Suppressed Demand
Unit	Percentage
Description	Percentage of premises that in the absence of the project activity would have used non-GHG emitting

	technologies like chlorine treatment techniques (if available) in the project boundary,.
Source of data	Baseline study. Credible literature, studies, survey, reports, relevant to the project target area
Value(s) applied	To be determined
Choice of data or Measurement methods and procedures	Suppressed demand will be determined through a set of questions in the project survey that establish the method households use to purify their water, if any, and how they would choose to purify if they were not subject to monetary and access barriers. This is in line with the Gold Standard principles of suppressed demand outline in annex 2. A fixed suppressed demand baseline has been opted for, however, in the event the project surveys show a substantial change in fuel use characteristics, a new baseline shall be conducted.
Purpose of data	Calculation of emission reductions
Additional comment	-

SDG 3

Data/parameter	$P_{b,y}$
Unit	Kg/household
Description	Quantity of fuel that is consumed in the baseline scenario b during year y (kg/household-day)
Source of data	Baseline Survey; Default Value
Value(s) applied	To be determined
Choice of data or Measurement methods and procedures	Baseline Project Survey to determine average household size.
Purpose of data	Calculation of SDG 3
Additional comment	-

Data/parameter	$P_{b,\ boil}$
Unit	Percentage
Description	Percentage of persons boiling water in the baseline
Source of data	Baseline Project Survey
Value(s) applied	To be determined
Choice of data or Measurement methods and procedures	The percentage of people stating that they used to boil their water for purification in the baseline scenario, evaluated through the baseline survey.
Purpose of data	Determination of number of persons boiling water in the baseline
Additional comment	-

SDG 5

Data/parameter	$Tb_{,y}$
Unit	Hours
Description	Time spent collecting firewood per household per day prior to project
Source of data	Baseline survey
Value(s) applied	To be determined
Choice of data or Measurement methods and procedures	Measured by question on time spent collecting firewood in the baseline survey.
Purpose of data	Calculation of SDG 5
Additional comment	-

B.6.3. Ex ante estimation of SDG Impact

Estimates of Ex Ante calculations will be provided at validation, following completion of baseline studies.

SDG 3

The proposed SDG impact methodology and indicator will be based on outcome of baseline monitoring that has not yet been finalised. Final version to be provided in time for validation.

SDG 5

The overall reduction in time spent collecting firewood by the project activity is calculated as follows:

$TR_y = T_{b,y} - T_{p,y}$

Where:

TR_y Total reduction time spent collecting firewood for project activity in year y (hours)

$T_{b,y}$ Baseline time spent collecting firewood per household per day (hours)

$T_{p,y}$ Project time spent collecting firewood per household per day (hours)

SDG 6

The number of additional persons having access to safe water in the project activity compared to the baseline scenario is calculated as follows:

$$P_{access} = P_y * (1 - C_j) * U_{p,y}$$

Where:

P_{access} Number of additional persons having access to safe water in the project activity compared to the baseline scenario.

P_y Number of persons having access to safe water in the project activity.

C_j Expressed as a percentage, the portion of users of the project technology j who in the baseline were already consuming safe water without boiling it.

$U_{p,y}$ Usage rate in project scenario p during year y

SDG 13

CO2 emission reductions are the indicator to demonstrate that the project has raised capacity for effective climate change-related planning and management. These are calculated ex-ante according to the description in Section B of the VPA-DD.

Baseline emissions

$$BE_{b,y} = B_{b,y} * \left(\left(fNRB_y * EF_{b,fuel,co2} \right) + EF_{b,fuel,nonco2} \right) * NCV_{b,fuel}$$

Project emissions

$$PE_{p,y} = B_{p,y} * \left(\left(fNRB_y * EF_{p,fuel,co2} \right) + EF_{p,fuel,nonco2} \right) * NCV_{p,fuel}$$

Where:

$$B_{p,y} = \left(1 - C_j\right) * N_{p,y} * W_{b,y} * \left(Q_{p,rawboil,y} + Q_{p,cleanboil,y}\right)$$

$$ER_y = \left(\left(\Sigma BE_{b,y} - \Sigma PE_{p,y} \right) * Up,y \right) - LEp,y\ ) * (1 - XBoil)$$

B.6.4. Summary of ex ante estimates of each SDG outcome

Ex ante estimations for each SDG outcome will be completed following completion of the baseline study, in time for validation.

SDG 3

Year	Baseline estimate	Project estimate	Net benefit
Year 1			
Year 2			
Year 2			
Year 4			
Year 5			
Total			
Total number of crediting years			
Annual average over the crediting period			

SDG 5

Year	Baseline estimate	Project estimate	Net benefit
Year 1			
Year 2			
Year 2			
Year 4			
Year 5			
Total			
Total number of crediting years			
Annual average over the crediting period			

SDG 6

Year	Baseline estimate	Project estimate	Net benefit
Year 1			
Year 2			
Year 2			
Year 4			
Year 5			
Total			
Total number of crediting years			
Annual average over the crediting period			

SDG 13

Year	Baseline estimate	Project estimate	Net benefit
Year 1			

Year 2			
Year 2			
Year 4			
Year 5			
Total			
Total number of crediting years			
Annual average over the crediting period			

B.7. Monitoring plan

B.7.1.

SDG 3

Data / Parameter	P_y
Unit	Number
Description	Number of persons having access to safe water from the project activity.
Source of data	Water point Project Database
Value(s) applied	Value to be provided in time for each verification.
Measurement methods and procedures	Sum of the total number of people using each water point in the project.
Monitoring frequency	Annual
QA/QC procedures	
Purpose of data	To measure the additional persons with access and provision to safe water in the project scenario, which will positively impact good health and wellbeing, as well as access to clean water and sanitation.
Additional comment	-

Data / Parameter	$P_{p,y}$
Unit	Kg/household
Description	Quantity of fuel that is consumed in the project scenario p during year y (kg/household-day)
Source of data	Baseline and Project Surveys
Value(s) applied	Value to be provided in time for each verification
Measurement methods and procedures	Baseline Survey
Monitoring frequency	Annual
QA/QC procedures	N/A
Purpose of data	Calculation of SDG 3
Additional comment	-

SDG 5

Data / Parameter	$T_{p,y}$
Unit	Hours
Description	Project time spent collecting water and firewood per household per trip.
Source of data	Project survey
Value(s) applied	Value to be provided in time for each verification.
Measurement methods and procedures	Established through questions in the project survey on a representative sample of the end users.
Monitoring frequency	Annual
QA/QC procedures	
Purpose of data	To measure the % decrease in hours spent collecting water and firewood, a responsibility falling disproportionately on women, as an indicator of reduced time poverty of women.

Additional comment	-

SDG 6

Data / Parameter	Qp,cleanboil,y
Unit	Litres per person per day
Description	Quantity of safe water boiled in the project scenario p during the year y using the zero or low emissions clean water supply technology
Source of data	Project Survey
Value(s) applied	Estimated at 0.
Measurement methods and procedures	Method used similar to Kitchen Performance Test in which the volume of water consumed in each household is averaged over 3 days. The WCFT will be carried out by staff trained by CO2balance to meet the specific requirements of the methodology. All data presented in excel is subject to checking and cross referencing of a sample of the raw data by CO2balance UK Ltd.
Monitoring frequency	N/A
QA/QC procedures	Clear guidance is provided to field staff and results are spot checked against the hard copy of the surveys.
Purpose of data	Emission reduction calculations
Additional comment	Measured boiled water consumed for drinking, cooking and basic personal hygiene considered safe for human consumption prior to boiling. This is assumed from the stated water source.

Data / Parameter	Qp,rawboil, y
Unit	Litres per person per day
Description	The raw unsafe water that is still boiled after installation of the water treatment technology
Source of data	Project Survey

Value(s) applied	Estimated at 0.
Measurement methods and procedures	Established through questions in the project survey on a representative sample of the end users.
Monitoring frequency	Annual
QA/QC procedures	Clear guidance is provided to field staff and results are spot checked against the hard copy of the surveys.
Purpose of data	Emission reduction calculations
Additional comment	Measured boiled water consumed for drinking, cooking and basic personal hygiene considered unsafe for human consumption prior to boiling. This is assumed from the stated water source.

Data / Parameter	Quality of Treated Water
Unit	Parameters as per national standards
Description	Performance of the treatment technology
Source of data	Laboratory Tests
Value(s) applied	Certificates supplied at verification
Measurement methods and procedures	The water quality will be tested in line with national standards in Malawi. The water samples will be taken at source by the testing body.
Monitoring frequency	Quarterly
QA/QC procedures	At least four tests each year conducted by an accredited laboratory.
Purpose of data	Criteria of methodology
Additional comment	Water is tested in accredited laboratories. Tested water is collected from source.

Data / Parameter	Hygiene campaigns

Unit	Outcome of WASH meetings
Description	Hygiene campaigns carried out among project technology users
Source of data	Annual hygiene campaign results
Value(s) applied	Report to be submitted in time for each verification.
Measurement methods and procedures	WASH Report
Monitoring frequency	Annual
QA/QC procedures	Sharing and checking of meeting pictures and participants lists.
Purpose of data	In accordance with TPDDTEC v3.1 methodology
Additional comment	-

SDG 13

Data / Parameter	LEp,y
Unit	tCO2e per year
Description	Leakage in project scenario p during year y.
Source of data	Baseline and monitoring surveys.
Value(s) applied	0
Measurement methods and procedures	Assessed every two years using baseline and monitoring surveys.
Monitoring frequency	Biennial
QA/QC procedures	
Purpose of data	Emission reduction calculations
Additional comment	-

Data / Parameter	Np,y
Unit	Project Technology Days

Description	Number of persons consuming water supplied by project scenario p through year y
Source of data	Borehole Project Database
Value(s) applied	Value to be provided in time for each verification
Measurement methods and procedures	Sum of the total number of people using each borehole in the project multiplied by the number of days crediting each borehole earns in this monitoring period
Monitoring frequency	Continuous
QA/QC procedures	Calculations are double-checked
Purpose of data	Emission reduction calculations
Additional comment	Household lists of borehole users including details for the main contact from the household

Data / Parameter	Up,y
Unit	Percentage
Description	Usage rate in project scenario p through year y
Source of data	Annual Usage Survey
Value(s) applied	Value to be provided with each verification.
Measurement methods and procedures	Annual usage survey will be carried out by staff trained by CO2balance to meet the specific requirements of the methodology. All data presented in excel is subject to checking and cross referencing of a sample of the raw data by CO2balance UK Ltd
Monitoring frequency	Annual
QA/QC procedures	Clear guidance is provided to field staff and results are spot checked against the hard copy of the surveys.
Purpose of data	Emission reduction calculations
Additional comment	Questions are asked in a face-to-face survey and designed to establish whether a household can be considered a regular user of the borehole

Data / Parameter	Qp,y
Unit	Litres per person per day
Description	Quantity of safe water supplied in the project scenario p during the year y using the zero or low emissions clean water supply technology
Source of data	Default Value
Value(s) applied	4
Measurement methods and procedures	Method used similar to Kitchen Performance Test in which the volume of water consumed in each household is averaged over 3 days. Volume capped at 7 litres per person per day as per the methodology. The WCFT will be carried out by staff trained by CO2balance to meet the specific requirements of the methodology. All data presented in excel is subject to checking and cross referencing of a sample of the raw data by CO2balance UK Ltd.
Monitoring frequency	N/A
QA/QC procedures	Clear guidance is provided to field staff and results are spot checked against the hard copy of the surveys.
Purpose of data	Emission reduction calculations
Additional comment	Measured water consumption is limited to drinking, cooking and basic personal hygiene. The quantity of safe water under these categories consumed in the project scenario is quantified through measurements and survey.

B.7.2. Sampling plan

A representative sample of technologies in the VPA will be sampled according to 90/30 confidence/precision (90% confidence interval and 30% margin of error) in accordance with the TPDDTEC v3.1 methodology. Out of the technologies selected, households will be randomly sampled, complying with the minimum sample size for the survey/test.

Individual participants will be selected from the solar desalination plant user database using the random selection process outlined in the monitoring plan. Sample sizes will

be in line with the Gold Standard requirements. The surveys below will be monitored under the approach stated:

- Project Survey – completed annually
- Usage Survey – completed annually

The surveys will be conducted so as to ensure that they are within the end date of the respective monitoring periods for each VPA.

B.7.3. Other elements of monitoring plan

Installation Record

A comprehensive installation record will record the following information:

- Date of installation
- GPS location of the technology
- Quantity of plants installed
- The total number of people obtaining their water from each plant
- Mode of use: commercial/domestic

The installation record will be backed up electronically, with original documentation being stored in a centralised location.

Project Database

The project database will be derived from the Installation Record, with project technologies differentiated by different project scenarios (if required).

All data collected in relation to the project will be held in the local office and/or on the Project Database for the entire life cycle of the project and a period of 2 years afterwards. The data may be archived during the project in order to maintain clarity and security.

Ongoing Monitoring Studies

The following ongoing monitoring studies are conducted for each project scenario following verification of the associated initial project studies.

a) *Project Survey* – Completed annually in time for 1st verification

The project survey is conducted on representative end users of the project technology. The survey asks questions on household characteristics, water use, wood fuel use and WASH. The survey determines the following parameters for SDG impact; $TP_{,y}$ (SDG 5) – time spent on firewood collection in the project scenario. The project survey is conducted on a minimum sample size of 100 households.

The project survey will also be used to monitor Q p,rawboil,y – the raw or unsafe water that is still boiled after installation of the water supply technology and Qp, cleanboil,y – quantity of safe water boiled in the project scenario after installation of the water supply technology.

b) Usage Survey – Completed annually, on time for any request of issuance

The usage survey provides a single usage parameter Up,y that is weighted based on drop off rates that are representative of the age distribution for project technologies in the installation record. The annual usage survey is conducted on a minimum sample size of 100 households.

c) *Quality of the treated water* - Completed quarterly, the first within 6 months of repair and in time for 1st verification

The quality of the treated water is assessed to ensure that it is fit for human consumption. It will be assessed in accordance with the Kenya Water Standards[6]. The parameters used to assess the water quality will be in line with Kenya Water Standards for potable water and all parameters will be shown to be within levels considered acceptable for domestic human consumption.

d) *Leakage Assessment* – Completed every other year

The potential sources of leakage will be investigated (LEp,y). If the assessment quantifies an increase in fuel consumption by the non-project households attributable to the project activity, then calculations will be adjusted to account for this.

e) *Non-renewable Biomass Assessment Update*- Reassessed at renewal of crediting period

In accordance with the methodology, the NRB assessment will remain fixed for the entire crediting period, although the project proponent may choose to reexamine the assessment at any time.

f) Np,y Project Technology Days

Number of persons consuming water supplied by project scenario p through year y. Sum of the total number of people using each solar desalination plant in the project multiplied by the number of days crediting each borehole earns in this monitoring period. The total number of households using each solar desalination plant will be determined through information supplied by GivePower Foundation and in house field teams. Using this method, the total number of people using each borehole will be known and hence a figure for person days can be calculated. All monitoring tasks will be selected at random.

g) Hygiene Campaign

A hygiene campaign is conducted annually in the format of Water, Sanitation and Hygiene (WASH) training at the community level.

[6] KS EAS 12:2018; ICS 13.060.20 Second Edition 2018

The trainings act to promote best WASH practices in the communities. WASH practices are also monitored annually as a series of questions in the Project Survey to determine the effectiveness of the trainings and to monitor the health status of the communities with regards to avoiding the spread of water borne diseases.

SECTION C. DURATION AND CREDITING PERIOD

C.1. Duration of project

C.1.1. Start date of project

31/08/2020

C.1.2. Expected operational lifetime of project

15 years (5 years twice renewable)

C.2. Crediting period of project

C.2.1. Start date of crediting period

01/09/2020

C.2.2. Total length of crediting period

5 years

SECTION D. SUMMARY OF SAFEGUARDING PRINCIPLES AND GENDER SENSITIVE ASSESSMENT

D.1. Safeguarding Principles that will be monitored

A completed Safeguarding Principles Assessment is in Appendix 1, ongoing monitoring is summarised below.

Principles	Mitigation Measures added to the Monitoring Plan
Principle 5. Corruption: 1. The Project shall not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects	Water pricing will be transparently communicated with local users. A continuous grievance mechanism will be set up for people to voice concerns relating to corruption, among other issues. This will be set up before validation in accordance with the Covid-19 Interim Measures.
Principle 4.3 Land Tenure and Other Rights 1. Does the Project require any change, or have any uncertainties related to land tenure arrangements and/or access rights, usage rights or land ownership?	Plants will only be installed in areas where land tenure rights are agreed in advance.

D.2. Assessment that project complies with GS4GG Gender Sensitive requirements

Question 1 - Explain how the project reflects the key issues and requirements of Gender Sensitive design and implementation as outlined in the Gender Policy?	The project increases women's access to resources such as water by making safe water available in the community. The burden on the whole community of travelling far to collect water and gather firewood for water purification is reduced. This also helps to mitigate the social isolation of spending a long time collecting these resources. Both women and men benefit from the project activities, no group is excluded from participating in the project activities and the water sources are open to the whole community. The project decreases the workload of women in collecting water and firewood, thereby allowing more time to engage in other activities. The project increases women's ability to use, develop, and protect natural resources by making safe water more readily available and enabling women to participate in project decision-making.
Question 2 - Explain how the project aligns with existing country policies, strategies and best practices	Official government documentation on Gender Policy in Kenya consists of the National Gender and Equality Commission Strategic Plan for the period

2017 – 2022, succeeding its predecessor implemented from 2013 – 2015 extended to 2017. The Strategic Plan will be used as a guide to align the project with current national gender policies and best practices in Kenya.

Some of the main objectives of the Kenya Gender Strategic Plan and how the project aligns with these are as follows:

Objective 1: "To enhance awareness on the principles of equality and inclusion"

The project seeks to promote gender equality in all project related activities such as water collection, plant management, and best WASH practices. The project aims to impact upon sustainable development within the communities it touches, including contributing to the sustainable development goals, one of which is SDG 5 gender equality. The impact of the project on SDG 5 will be measured on an annual basis during project monitoring to determine the contribution towards the SDG 5 target 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.

Objective 2: "To enhance organisational capacity, effectiveness and efficiency"

The project contributes positively towards this objective because safe water access will be improved, reducing the burden on women and girls to travel far to collect water. This gives them more time and opportunity to pursue development enhancing activities such as income generating activities and education, which may have once been sacrificed to provide water for the homestead. This acts to close the gender gap by allowing women and girls more time for self-improvement and development. The project survey will monitor the impacts of time saved from the project and what activities respondents are choosing to do with their time saved.

Furthermore, the borehole provides clean and safe water for families to reduce the health risks of unsafe water and provide increased hygiene in the household. This helps beneficiaries achieve a more sustainable livelihood over the project lifetime.

	Objective 3 and 4: "To enhance participation and inclusion of Specialist Interest Groups (SIGs) in development agenda and to enhance stakeholder involvement" The project will not discriminate against any members of society and will encourage all members in the project area to take part in the project. In providing clean water, the projects are allowing communities to develop and lead more sustainable lives without the need to boil water for purification. The projects will help to close community and household gender gaps through the provision of clean water, regardless of existing social structures.
Question 3 - Is an Expert required for the Gender Safeguarding Principles & Requirements?	No
Question 4 - Is an Expert required to assist with Gender issues at the Stakeholder Consultation?	No

SECTION E. SUMMARY OF LOCAL STAKEHOLDER CONSULTATION

The below is a summary of the 2 step GS4GG Consultation for monitoring purposes. Please refer to the separate Stakeholder Consultation Report for a complete report on the initial consultation and stakeholder feedback round.

E.1. Summary of stakeholder mitigation measures

Following the guidance set out in the Covid-19 Interim Measures v3 document, physical stakeholder consultations are currently postponed until the Covid-19 situation eases.

Continuous input and grievance mechanisms shall be set up before commencement of project validation, in line with the requirements prescribed in Section 7 of the GS Stakeholder Consultation and Engagement Requirements. It will be ensured that stakeholders, especially communities around the project site, shall be informed about the grievance mechanism and available methods for sharing inputs and concerns.

E.2. Final continuous input / grievance mechanism

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
Other	

APPENDIX 1 - SAFEGUARDING PRINCIPLES ASSESSMENT

Complete the Assessment below and copy all Mitigation Measures for each Principle into SECTION D above. Please refer to the instructions in the Guide to Completing this Form below.

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
Principle 1. Human Rights			
1. The Project Developer and the Project shall respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights 2. The Project shall not discriminate with regards to participation and inclusion	No	The project adheres to all human rights requirements including respecting internationally proclaimed human rights and Universal Declaration of Human Rights and does not discriminate in any way.	During all trainings, it is emphasised that project beneficiaries should support vulnerable or less mobile community members to access water.
Principle 2. Gender Equality			
1. The Project shall not directly or indirectly lead	No	The project increases women's access to resources	

to/contribute to adverse impacts on gender equality and/or the situation of women 2. Projects shall apply the principles of nondiscrimination, equal treatment, and equal pay for equal work 3. The Project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks 4. (where required) Summary of opinions and recommendations of an Expert Stakeholder(s)		such as water by making safe water available in the community. The burden on the whole community of travelling far to collect water and gather firewood (or purchase charcoal) for water purification is reduced. This also helps to mitigate the social isolation of spending a long time collecting these resources. Both women and men benefit from the project activities, no group is excluded from participating in the project activities and the water sources are open to the whole community. The project decreases the workload of women in collecting water and firewood (and/or charcoal), thereby	

		allowing more time to engage in other activities. The project increases women's ability to use, develop, and protect natural resources by making safe water more readily available and enabling women to participate in project decision-making. No further risks or hazards for women and girls have been identified.	
Principle 3. Community Health, Safety and Working Conditions			
1. The Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the workers and the community	No	The project reduces the community exposure to water borne illness through the provision of a safe water source and reduces the risk of household air pollution by removing the need for households to boil water for purification.	Incidences of water borne illnesses are monitored through the annual Monitoring Project Survey. A WASH programme is carried out by the project, including WASH training at the beginning of the project, and subsequent annual WASH trainings.

Principle 4.1 Sites of Cultural and Historical Heritage			
Does the Project Area include sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture?	No	The project area does not include cultural and historic sites. The focus of the project is on installing and maintaining water point infrastructure only.	
>>			
Principle 4.2 Forced Eviction and Displacement			
Does the Project require or cause the physical or economic relocation of peoples (temporary or permanent, full or partial)?	No	The project does not impact the physical or economic relocation of peoples. The focus of the project is on installing and maintaining water point infrastructure only.	
>>			
Principle 4.3 Land Tenure and Other Rights			
Does the Project require any change, or have any uncertainties related to land tenure arrangements and/or access rights, usage rights or land ownership?	Yes	Land tenure rights are agreed in order to set up and operate project technologies.	Plants will only be installed in areas where land tenure rights are agreed in advance.
>>			
Principle 5. Corruption			

1. The Project shall not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects	Yes	The project ensures that all forms of corruption are avoided. Project beneficiaries are able to contact the project developer and implementer through the continuous grievance mechanism to report any form of corruption.	Water pricing will be transparently communicated with local users. A continuous grievance mechanism will be set up for people to voice concerns relating to corruption, among other issues. This will be set up before validation in accordance with the Covid-19 Interim Measures.
Principle 6.1 Labour Rights			
1. The Project Developer shall ensure that all employment is in compliance with national labour occupational health and safety laws and with the principles and standards embodied in the ILO fundamental conventions 2. Workers shall be able to establish and join labour organisations 3. Working agreements with all individual	No	The project adheres to all labour laws and requirements	

workers shall be documented and implemented and include: a) Working hours (must not exceed 48 hours per week on a regular basis), AND b) Duties and tasks, AND c) Remuneration (must include provision for payment of overtime), AND d) Modalities on health insurance, AND e) Modalities on termination of the contract with provision for voluntary resignation by employee, AND f) Provision for annual leave of not less than 10 days per year, not including sick and casual leave. 4. No child labour is allowed (Exceptions for			

children working on their families' property requires an Expert Stakeholder opinion) 5. The Project Developer shall ensure the use of appropriate equipment, training of workers, documentation and reporting of accidents and incidents, and emergency preparedness and response measures			
Principle 6.2 Negative Economic Consequences			
1. Does the project cause negative economic consequences during and after project implementation?	No	The project is not expected to have any negative economic impacts or cause any risks.	
>>			
Principle 7.1 Emissions			
Will the Project increase greenhouse gas emissions over the Baseline Scenario?	No	The project reduces greenhouse gas emissions compared to the baseline scenario	
>>			

Principle 7.2 Energy Supply			
Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users?	No	The project uses solar photovoltaic cells that are not connected to any local grid or power supply.	
>>			
Principle 8.1 Impact on Natural Water Patterns/Flows			
Will the Project affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?	No	There will be no significant change in the volume of water consumed by the households.	
>>			
Principle 8.2 Erosion and/or Water Body Instability			
Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion?	No	Water provision is for household usage. Therefore it is extremely unlikely that there is additional erosion and/or water body instability	

>>		or disruption of the natural pattern of erosion.	
Principle 9.1 Landscape Modification and Soil			
Does the Project involve the use of land and soil for production of crops or other products?	No	No crops or other products are produced in the project.	
>>			
Principle 9.2 Vulnerability to Natural Disaster			
Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions?	No	There is no impact by the project to natural disasters.	
>>			
Principle 9.3 Genetic Resources			
Could the Project be negatively impacted by or involve genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development, or take place in facilities or farms	No	No GMOs are used in the project and the solar desalination plants would not be affected by GMOs as they are all protected.	

that include GMOs in their processes and production)?			
>>			
Principle 9.4 Release of pollutants			
Could the Project potentially result in the release of pollutants to the environment?	No	The project provides clean safe water and thus there is no risk of releasing pollutants to the environment.	
>>			
Principle 9.5 Hazardous and Non-hazardous Waste			
Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials?	No	The project does not deal with hazardous or non-hazardous chemicals and/or materials.	
>>			
Principle 9.6 Pesticides & Fertilisers			
Will the Project involve the application of pesticides and/or fertilisers?	No	No pesticides and/or fertilisers are used in the project.	
>>			
Principle 9.7 Harvesting of Forests			
Will the Project involve the harvesting of forests?	No	As the project reduces the consumption of firewood,	

>>		there is a positive impact on forests.	
Principle 9.8 Food			
Does the Project modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	No	The project has no impact on the quantity or nutritional quality of food.	
>>			
Principle 9.9 Animal husbandry			
Will the Project involve animal husbandry?	No	The project does not involve animal husbandry.	
>>			
Principle 9.10 High Conservation Value Areas and Critical Habitats			
Does the Project physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified?	No	The project installs solar desalination plants and decreases the consumption of firewood, having a positive impact on conserving forest ecosystems.	
>>			
Principle 9.11 Endangered Species			

Are there any endangered species identified as potentially being present within the Project boundary (including those that may route through the area)? AND/OR Does the Project potentially impact other areas where endangered species may be present through transboundary affects?	No	There are several endangered species in Kenya. The project is not envisaged to have any impact on their habitat as it only affects solar desalination plant infrastructure. The project does not impact other areas where endangered species are present.	
>>			

APPENDIX 2- CONTACT INFORMATION OF VPA IMPLEMENTER

Organization name	CO2balance UK Ltd
Registration number with relevant authority	4889958 (UK company registration number)
Street/P.O. Box	Cook Way
Building	1 Discovery House
City	Taunton
State/Region	Somerset
Postcode	TA2 6BJ
Country	United Kingdom
Telephone	+441823332233
E-mail	thomas.devesa@co2balance.com
Website	www.co2balance.com
Contact person	Thomas Devesa
Title	Project Manager
Salutation	Mr
Last name	Devesa
Middle name	
First name	Thomas
Department	Projects
Mobile	
Direct tel.	+441823332233
Personal e-mail	thomas.devesa@co2balance.com

APPENDIX 3-SUMMARY OF APPROVED DESIGN CHANGES

Please refer to Annex A of Principles and Requirements for more information on procedures governing Design Changes

Revision History

Version	Date	Remarks
1.1	7 October 2020	Hyperlinked section summary to enable quick access to key sections Improved clarity on Key Project Information Inclusion criteria table added Gender sensitive requirements added Prior consideration (1 yr rule) and Ongoing Financial Need added Safeguard Principles Assessment as annex and a new section to include applicable safeguards for clarity 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
1.0	10 July 2017	Initial adoption