Verification and certification report form for Gold Standard VPA

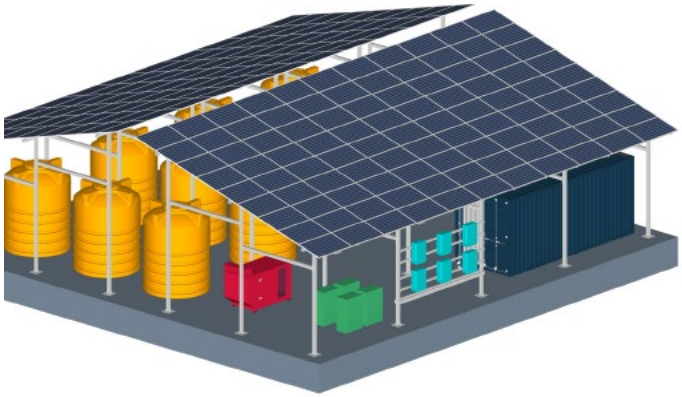
BASIC INFORMATION	
Title and reference number of the project	GivePower Kenya Solar Water Farms (GS10987)
Scale of the project	☐ Large-scale ☒ Small-scale
Version number of the verification and certification report	07
Completion date of the verification and certification report	27/03/2025
Monitoring period number and duration of this monitoring period	MP2 - 01/01/2022 to 31/03/2024 (Including both days)
Version number of the monitoring report to which this report applies	Version 7, 26/03/2025
Crediting period of the project corresponding to this monitoring period	1st Crediting period from 01/09/2020 to 31/08/2025
Project participants	CO2balance UK Ltd GivePower Foundation
Host Party	Republic of Kenya
Applied methodologies and standardized baselines	Technologies and Practices to Displace Decentralized Thermal Energy Consumption, Version 3.1
Mandatory sectoral scopes	Sectoral scope 3: Technical Area 3.1 - Energy demand
Conditional sectoral scopes, if applicable	N/A
Estimated amount of GHG emission reductions or GHG removals for this monitoring duration in the registered PDD	2022: 60,000 tCO_2e 2023: 60,000 tCO_2e 2024: 15,000 tCO_2e
Certified amount of GHG emission reductions or GHG removals for this monitoring period	2022: 15,917 tCO_2e 2023: 26,982 tCO_2e 2024: 7,951 tCO_2e
SDG Impacts	**SDG 3:** **Number of additional persons having access to safe water in the project activity compared to the baseline scenario** 2022: 28,454 2023: 37,022 2024: 44,415

	SDG 5: **Reduction in time spent collecting firewood per day (in hours)** 2022: 2.15 2023: 2.23 2024: 2.23 **SDG 6:** **Number of additional persons having access to safe water in the project activity compared to the baseline scenario** 2022: 26,756 2023: 39,388 2024: 47,254
Name and reference number of the VVB	Ampere for Renewable Energy (Ampere) UNFCCC Ref. No: E-0071 https://cdm.unfccc.int/DOE/list/DOE.html?entityCode=E-0071
Name, position and signature of the approver of the verification and certification report	Ahmad Qadry, Technical Manager

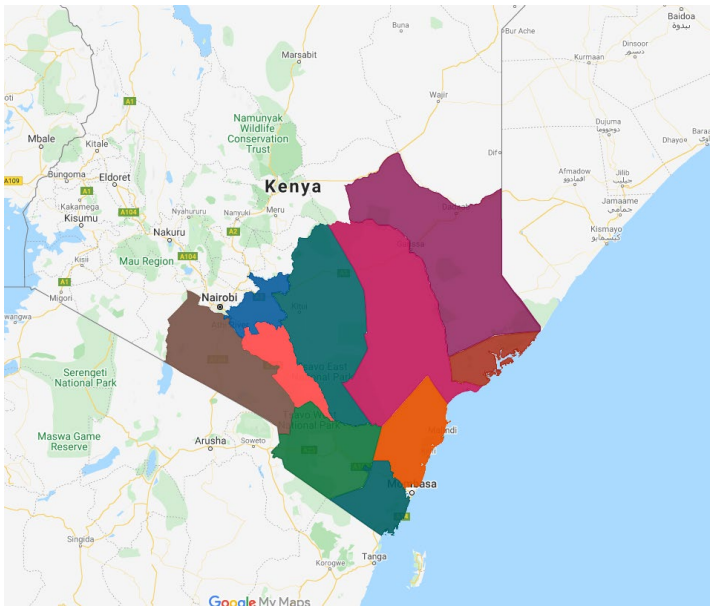
SECTION A. Executive summary

Ampere for renewable energy (hereafter referred to as Ampere) is performing the Second periodic verification of the project with unique VPA ID GS10987. For the period 01/01/2022 to 31/03/2024, the VPA's objective is to mitigate emissions from non-renewable biomass used in water treatment. The reliance on wood and charcoal for boiling water releases greenhouse gases, contributes to deforestation, and harms indoor air quality. This initiative delivers safe water through photovoltaic-powered desalination to thousands of households in coastal Kenya. By offering purified water, the project reduces the need for firewood and charcoal, leading to lower carbon dioxide emissions.

Photograph example of the GivePower MAXI plant.



Digital drawing of GivePower MAXI plant.



The project boundary lies in the coastal region of Kenya, within which solar desalination plants were installed. This geographic 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 geographic locations 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.

Plant ID	Location	Latitude	Longitude	Status
MAXI 1	Likoni	4° 5' 0.97" S	39° 39' 50.69" E	Live (added MP1, 8/31/2020)
MAXI 2	Bamburi	3° 59' 43.45" S	39° 42' 31.02" E	Live (added MP1, 6/28/2021)
MOBI+ 1	Makindu	2° 16' 13.69" S	37° 49' 14.92" E	Removed (MP2)
MAXI 3	Kitengala	1° 32' 58.06" S	36° 56' 26.85" E	Live (added MP2, 6/20/2022)
MAXI 4	Kiunga	1° 44' 59.62" S	41° 29' 2.68" E	Live (added MP2, 1/1/2022)
MOBI 1	Mokowe	2° 13' 44.09" S	40° 50' 48.2" E	Live (added MP2, 9/24/2022)
MAXI 5	Mtongwe	4° 5' 44.6" S	39° 38' 26.19" E	Live (added MP2, 12/26/2022)
MOBI+ 2	Mwingi	0° 56' 18.9" S	38° 3' 29.98" E	Live (added MP2, 11/14/2022)
MOBI+ 3	Wote	1° 46' 7.99" S	37° 37' 46.23" E	Live (added MP2, 4/8/2022)

According to the registered VPA-DD & MR, the overall objective of the VPAs is to contribute to the achievement of the Sustainable Development Goals (SDGs) under SDG 3, SDG 5, SDG 6 and SDG 13 by providing safe water from solar water desalination project, the project ensures that households consume less firewood during the process of water purification and as a result there shall be a reduction of carbon dioxide emissions from the reduction of combustion of fire wood.

This report summarizes the findings of the verification of the project (refer to Appendix 4), performed on the basis of Gold Standard for global goals (GS4GG), as well as criteria given to provide for consistent project operations, monitoring and reporting and the subsequent decisions by the Gold Standard. Verification is required for all registered GS project activities intending to confirm their achieved emission reductions and proceed with the request for issuance of VERs. This report contains the findings and resolutions from the verification and a certification statement for the verified emission reductions.

Verification is the periodic independent review and ex-post determination of both quantitative and qualitative information by a Validation & Verification body (VVB), of the monitored reductions in GHG emissions under SDG 13 including the achievement of other SDGs mentioned above that have occurred as a result of the project activity during the defined monitoring period

The objective of this verification was to verify and certify achievement of SDGs reported for the registered VPA with the following title "GivePower Kenya Solar Water Farms (GS10987)" under PoA GS7591 for the period 01/01/2022 to 31/03/2024 (including both the days).

The purpose of verification is to review the monitoring results and verify that the monitoring methodology was implemented according to the monitoring plan and monitoring data and used to confirm the reductions in anthropogenic emissions by sources, is sufficient, definitive and presented in a concise and transparent manner. Ampere's objective is to perform a thorough, independent assessment of the registered VPA.

In particular, the monitoring plan, monitoring report and the project's compliance with relevant GS and Host Party criteria are verified in order to confirm that the component project has been implemented in accordance with the previously registered project design and conservative assumptions, as documented. It is also confirmed if the monitoring plan is in compliance with the registered VPA-DD and the approved monitoring methodology.

Scope:
The scope of the verification is:

- To verify the project implementation and operation with respect to the registered VPA-DD
- To verify the implemented monitoring plan with the registered VPA-DD and applied baseline and monitoring methodology.
- To verify that the actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan.
- To evaluate the GHG emission reduction data along with SDG impacts and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data and achieved SDG impacts are free from material misstatement.
- To verify that reported GHG emission data and SDG impact is sufficiently supported by evidence.

The verification ensures that the reported emission reductions are complete and accurate in order to be certified.

Verification process:
The verification comprises a review of the monitoring report over the monitoring period from 01/01/2022 to 31/03/2024 and based on the registered VPA-DD as part of the monitoring parameters and monitoring plan, emission reduction calculation spreadsheet, monitoring methodology, and all related evidence provided by project participants. On-site interviews and inspections are also performed as part of the verification process.

Conclusion:
The verification team assigned by the Validation & Verification body (VVB) - Ampere concludes that the monitoring report, meet all relevant requirements of the Gold Standard as per the requirements of GS4GG. The verification has been conducted in-line with the GS4GG standards & requirements.

The project activity was correctly implemented according to the selected monitoring methodology, monitoring plan and the registered VPA-DD. The monitoring system was installed, maintained in a proper manner, while collected monitoring data allowed for the verification of the amount of achieved GHG emission reductions. The following table provides the resulted emission reduction from the project as verified through the document review and remote on-site interviews by the verification team. The estimated emission reductions in the VPA-DD were 60,000 tCO_2e.

VPA Number	**2022 Vintage (1/1/2022 – 31/12/2022)**	**2023 Vintage (1/1/2023 – 31/1/2023)**	**2024 Vintage (1/1/2024 – 31/3/2024)**	**Subtotal VER (tCO_2e)**
GS10987	15,917	26,982	7,951	50,850
Total for the monitoring period (01/01/2022 to 31/03/2024)				Total: 50,850

Ampere as a Validation & verification body (VVB) is therefore pleased to issue a positive verification opinion expressed in the section G of this report.

SECTION B. Verification team, technical reviewer and approver

B.1. Verification team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Verification findings
1.	Team Leader	IR	Abdellatif	Yehya	Central	Y	N	Y	Y
2.	Verifier & Technical Expert	IR	Sarhan	Ahmad	Central	Y	Y	Y	Y
3	Local expert	EI	Adwek	George	Central	N	Y	Y	N

B.2. Technical reviewer and approver of the verification and certification report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)
1.	Technical reviewer	EI	Meesa	Srikanth	Central
2.	Approver	IR	Qadry	Ahmad	Central

SECTION C. Application of materiality

C.1. Consideration of materiality in planning the verification

Based on the review of ER sheet, it can be confirmed that the actual individual and aggregated material error is determined for the VPAs as per GS requirements. The verification team has conducted a complete verification of all the information presented in the monitoring report and data monitored as presented in the emission reduction calculation spread sheet. There are no material errors, overestimation of ER, omission, or misstatement detected in the GHG statement of the report.

C.2. Consideration of materiality in conducting the verification

Based on the review of the ER sheet, it is confirmed that the actual individual and aggregated material error for the VPA is determined in accordance with GS requirements to be 2%. The verification team has thoroughly verified all information presented in the monitoring report and the data monitored, as detailed in the emission reduction calculation spreadsheet. In line with Section 9.6.3 of GS VVS v.1, The verification team applied the 5% materiality threshold, no material errors, overestimations of ER, omissions, or misstatements were identified.

SECTION D. Means of verification

D.1. Desk/document review

The verification process was primarily conducted as a desk review of the documents submitted at various stages of the assessments. The assessment team carried out this review using verification protocols, such as checklists. They cross-checked the information provided in the Monitoring Report (MR) with other available sources and conducted independent background investigations. Ampere's desk review included, but was not limited to, the following activities:

- Reviewing the data and information presented to verify their completeness.

- Reviewing the monitoring plan and methodology, with particular attention to the frequency of measurements, the quality of metering equipment, including calibration requirements, and the quality assurance and quality control procedures.
- Reviewing calculations and assumptions made in determining the GHG data and emission reductions.
- Evaluating data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

The list of documents reviewed can be found in 'Appendix 3' of this report.

D.2. On-site inspection

Duration of on-site inspection: 10/06/2024 to 14/06/2024				
No.	**Plant visited on-site**	**Site location**	**Date**	**Team member**
1.	MAXI 5	Mtongwe	10/06/2024	Ahmad Sarhan & George Adwek
2	MAXI 1	Likoni	10/06/2024	Ahmad Sarhan & George Adwek
3	MAXI 2	Bamburi	11/06/2024	Ahmad Sarhan & George Adwek
4	MOBI+ 2	Mwingi	12/06/2024	Ahmad Sarhan & George Adwek
5	MOBI+ 3	Wote	13/06/2024	Ahmad Sarhan & George Adwek
6	MAXI 3	Kitengela	14/06/2024	Ahmad Sarhan & George Adwek

D.3. Interviews

No.	**Interviewee**			**Date**	**Subject**	**Team member**
	Last name	**First name**	**Affiliation**			
1.	Hamunla	Claude	Site manager at Likoni site, GivePower	10/06/2024	1. Roles and responsibilities 2. Data collection 3. Water quality test (internal and external) 4. Grievance process 5. Daily procedures and protocols 6. Electronic Data flow 7. Type Users & Customers 8. Maintenance and safety measures 9. Mechanical and Electrical inspection discussion 10. Sales recording process	Ahmad Sarhan & George Adwek
2	Mooki	George	Site manager assistant at Likoni site, GivePower	10/06/2024		Ahmad Sarhan & George Adwek
3	Samsun	Lekimang upi	Senior site manager at Mtongwe site, GivePower	10/06/2024		Ahmad Sarhan & George Adwek
4	Bebe	Ateek	Site manager at Mtongwe site, GivePower	10/06/2024		Ahmad Sarhan & George Adwek
5	Okuku	Marcella	Site manager at Bamburi site, GivePower	11/06/2024		Ahmad Sarhan & George Adwek
6	Owoko	Getruder	Senior site manager at Bamburi site, GivePower	11/06/2024		Ahmad Sarhan & George Adwek
7	Muerui	Beatrice	Site manager at Mwingi site, GivePower	12/06/2024		Ahmad Sarhan & George Adwek
8	Mwikohi	Sila	Site manager at Wote site, GivePower	13/06/2024		Ahmad Sarhan & George Adwek
9	Wabwile	Jonas	Site manager at Kitengla site, GivePower	14/06/2024		Ahmad Sarhan & George Adwek
10	Loice Juma	Cynthia	Junior sales at Kitengla site, GivePower	14/06/2024		Ahmad Sarhan & George Adwek

Interviews with the Project Survey/Usage households:

No.	Site Location	Site ID	Interviews with the Project Survey/Usage households:	Interviews with the Project Survey/Usage households:	Team members
1	Mtongwe	MAXI 5	Charles, Mwashigadi James, Sivi Zachara Wphasla Mahsoud	1. Verification of data collected through sample survey 2. Awareness about ownership of ERs 3. Working condition of unit 4. SDG parameters verification 5. Water Quality feedback and level of satisfaction. 6. Water accessibility	Ahmad Sarhan & George Adwek
2	Likoni	MAXI 1	Celestine, shimirimana Winnie, Odhiambo Amina, Juma Kennedy, Onyango Seth, Odhiambo Dennis, Oiro Jane, Micere Kennedy, Wafula		
3	Bamburi	MAXI 2	Murice, Otieno Alex, Otieno Phylis, Wanja Aish, Juma		
4	Mwingi	MOBI+ 2	Lydia, Kakali Kisinga, Paul Mary, Mutunga		
5	Wote	MOBI+ 3	Peter, Mutinda Joshua, Kilei Cornelius, Mumo Thomas, Muthoka		
6	Kitengela	MAXI 3	Richard, Obuya Nancy, Bosire Dancan, Kigen David, Wakasiaka Hannah, Wagangeci Judith, Akinyi		

D.4. Sampling approach

As per para 28, Standard: Sampling and surveys for CDM project activities and programmes of activities version 9.0, Ampere has applied acceptance sampling, to review the data collection and appropriateness of monitoring plan.

As per para 39 of "Standard for Sampling and surveys for CDM project activities and programmes of activities, Version 9.0," A DOE may select a different sample size than the one indicated in paragraph 32, either by choosing a different value for the consumer risk and producer risk (e.g., 20% for the consumer risk) when applying acceptance sampling or by using another approach, if any of the following conditions apply:
a) The estimated volume of annual emission reductions of the project activity or the PoA being verified is equal to or less than 100,000 tCO_2e.
b) The security conditions in the project region prevents inspection of many samples (e.g., conflict zones); or
c) The project activity or the PoA is in a least developed country or a host Party with 10 or fewer registered CDM project activities at the end of the monitoring period being verified.

In case of the current verification assessment, the estimated volume of annual emission reductions of the project activity or the PoA/VPA under registration is equal to or less than 100,000 tCO_2e thus meeting the requirement of para 39(a).

This verification covered 2 annual monitoring surveys conducted by the PP, for the annual monitoring surveys of 2022, the sample size did not meet the minimum requirements. However, as per the deviation approved by Gold Standard, this sample size was accepted.

Annual Monitoring 2022:

The verification team determined the sample size for acceptance sampling for the 2022 annual monitoring by evaluating the following, using its own professional judgement and guidance in the Standard 'Sampling and surveys for CDM project activities and programme of activities':

- The proportion of discrepancies between the PP's data and verification team's (field or onsite inspection/ remote survey results results) data that can be considered acceptable. This is referred to as the AQL (Acceptable Quality Level): 1% was considered in this verification.
- The proportion of discrepancies between the PP's data and verification team's (field or onsite inspection/remote survey results) data that would be considered unacceptable. This is the UQL (Unacceptable Quality Level): 20% was considered in this verification.
- The producer risk of 10% and consumer risk of 20% was considered.

Considering the above input values, a sample size (n) of 8 was required with acceptance number (c) as 1 as per Table 2 in the referred Standard. The assessment team selected a sample size of 8 across 4 randomly selected representative villages, 2 random persons were selected for interviews per village with 1 additional pick for each to account for unavailability.

The assessment team checked all 8 samples during the remote audit. The answers given were consistent with the results from the PP provided through surveys, and no discrepancy was observed.

The sample size of 8 meets the required minimum and no samples were rejected thus acceptance number was not exceeded and thus the sampling meets the criteria in line with "Standard for Sampling and surveys for CDM project activities and programmes of activities, Version 9.0,".

Annual Monitoring 2024:

The verification team also determined the sample size for acceptance sampling for the 2024 annual monitoring by evaluating the following, using its own professional judgement and guidance in the Standard 'Sampling and surveys for CDM project activities and programme of activities':

- The proportion of discrepancies between the PP's data and verification team's (field or onsite inspection/ remote survey results results) data that can be considered acceptable. This is referred to as the AQL (Acceptable Quality Level): 1% was considered in this verification.
- The proportion of discrepancies between the PP's data and verification team's (field or onsite inspection/remote survey results) data that would be considered unacceptable. This is the UQL (Unacceptable Quality Level): 10% was considered in this verification.
- The producer risk of 10% and consumer risk of 20% was considered.

Considering the above input values, a sample size (n) of 29 was required with acceptance number (c) as 1 as per Table 2 in the referred Standard. The assessment team selected a sample size of 32 across 6 villages, 5 from Bamburi, 4 from Kitengela, 10 from Likoni, 4 from Mtongwe, 4 from Miwing, and 5 from Wote were selected for interviews per village with additional buffer picks for each to account for unavailability.

To ensure a representative sample for our analysis, we employed a stratified random sampling approach. This involved dividing the overall population into distinct strata based on project site locations. This stratification allowed us to capture the unique characteristics and potential variations within each site. Subsequently, we randomly selected participants from each stratum, ensuring that the number of individuals chosen from each location was proportional to its representation in the overall population. Furthermore, to account for potential spatial influences, we incorporated buffer zones around each village, selecting an equally proportional number of participants from these buffer areas whenever possible. This meticulous stratification and proportional sampling strategy ensured that our sample accurately reflected the diversity of the population across all project sites and minimized potential biases associated with spatial clustering. Further evidence of the sampling conducted can be found in Appendix 5 of this document.

The assessment team checked all 32 samples during the remote audit. The answers given were consistent with the results from the PP provided through surveys, and no discrepancy was observed.

The sample size of 32 meets the required minimum of 29 and no samples were rejected thus acceptance number was not exceeded and thus the sampling meets the criteria in line with "Standard for Sampling and surveys for CDM project activities and programmes of activities, Version 9.0,".

D.5. Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised

Ampere has raised 8 clarifications (CLs), 9 corrective action requests (CARs), and 0 forward action request (FAR). A comprehensive listing of the findings of this verification is documented in Appendix 4 of this document.

SECTION E. Verification findings

E.1. Compliance of the monitoring report with the monitoring report form

Means of verification	The verification team has checked the monitoring report formatting and structuring against the latest monitoring report form & monitoring report guideline. Desk review assessed that all required information, sections, and tables are in place and that the project participants have documented the monitoring report as per the latest Monitoring Report Template (V1.1) & Monitoring Report Template Guide (V1.1).
Findings	CL02, CAR01 & CAR08 were raised during the verification process and closed satisfactorily.
Conclusion	Verification team confirms that the latest available version of the monitoring report template has been used and the MR is in compliance with the monitoring report form and related monitoring report template guide.

E.2. Remaining forward action requests from validation and/or previous verifications

This is the 2nd verification of GS10987. The Verification report has been reviewed, and the following FARs have been raised during the verification and certification process:

FAR ID 01: In accordance with the deviation request dated 14/12/2021, the PD shall assure that the Hygiene campaigns are performed as soon as the country situation allows. The details of the hygiene campaigns shall be checked at the time of the next periodic verification.

FAR ID 02: As per para 2.1.1 of COVID 19: Interim Measures, project developer may postpone physical stakeholder consultation meetings and the Stakeholder Feedback Round (SFR) for Gold Standard project/POA/VPAs until the COVID-19 situation eases. CME/CPA implementer need to carry out the physical stakeholder consultation meeting and SFR at a later stage as soon as the situation allows. The compliance of this FAR shall be checked at the time of the next periodic verification.

FAR ID 03: During the 1st verification of the VPA, Verification team need to check supportive document for the methodology requirement "The water in its improved form should be available within 1 km walking/pedaling distance from the households. There is a two-year grace period (from date of registration) for any households falling outside of this distance, however once this period is over these households would not be included in the emission reductions calculation. The compliance of this FAR shall be checked at the time of the next periodic verification.

FAR ID 04: During the 1st verification of the VPA, a deviation request was approved by the SustainCERT. In accordance with the deviation request, the requirements on the usage rate shall be complied by the PP and other points of the deviation request may be addressed during the next periodic verification.

All of the abovementioned FARs have been addressed during this verification and closed successfully. Refer to Appendix 4 of this document for further details.

E.3. Compliance of the project implementation and operation with the registered project design document

Means of verification	The verification team confirmed that the VPAs and their operations align with the validated VPA-DD. Through a desk review and an on-site visit, the verification team assessed that all physical aspects of the voluntary project activity, as proposed in the validated VPA-DDs, are in place, and that the project participants have operated the project as per the Registered VPA-DDs. The verification team has checked the information in the monitoring report and compared against the registered VPA-DD.

	During the onsite inspection, and for the selected sample the verification team has checked the project locations , and the project technology for Solar Desalination in each plant and the associated equipment, and monitoring system against the information in the VPA-DDs for the listed plants in section D.3 above.
Findings	CL01, CAR02, CAR06 were raised during the verification process and closed satisfactorily. Refer to Appendix 4 for more details.
Conclusion	Verification team based on onsite interviews with operation managers and local users, review of MR, and review of provided evidence, confirms that the end users relinquish their right of carbon credits as evidenced in the provided CTFs. As verified through document review and on-site interviews, the project implementation and operation, and all physical features of the project comply with theVPA-DD. PP has submitted training records during the verification to confirm that staff are trained in order to conduct the WASH training for the community people. This has been verified by Ampere's verification team. A well-setup feedback mechanism is available for each site. PP has maintained grievance logbooks at sites and taken feedback from plant users during the monitoring period. This has been verified with the grievance log- book. PP has submitted a legal declaration and it has been verified that there are no legal contests or disputes to any aspect of the project through the available ongoing grievance input mechanisms or any other direct means. PP provided an analysis of the most commonly raised issues by local users, which also matched the results obtained from the physical site visit. As verified from on-site interview, the audit team confirms the project implementation and operation complies with the VPA-DD. The starting date of operation is 31/08/2020 (commissioning of first water farm) which is confirmed by the registered VPA-DD and validation report. The project boundary in the registered VPA-DD is in line with the actual project boundary. Ampere confirms that the project water farms are operational through on-site visits and interviews with end users. It is noted that no changes have been observed or identified, that may impact the additionality. No addition of component nor extension of technology, no addition nor removal of project sites, no change of values of the actual operational parameter relevant to determination of emission reductions which are within the control of the PP; no change has been observed or identified that may impact the scale of the project activity or applicability of baseline and monitoring methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 3.1. Verification team confirms that: a) The project activity is implemented as per registered VPA-DD. b) The actual operation of the proposed project activity is in line with the registered/revised VPA-DD. c) It has reviewed the registered VPA-DD including the monitoring plan, the applied monitoring methodology and found that the final MR for this monitoring period is in line with all the above-mentioned documents. Verification team of Ampere based on review of records and on-site interviews confirms that a robust and effective grievance addressal mechanism is in place. In summary, the accuracy of monitoring period is assured, and the operation of the project activity is in accordance with the registered VPA-DD.

E.4. Post-registration changes

E.4.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents[1]

DEV_663- Deviation request was approved on 27/04/2024. The deviation refers to section B.7.2 of the VPA-DD states that "Individual participants will be selected from the project user database using the random selection process outlined in the monitoring plan." Whereby "The project will collect user lists via the WASH gatherings implemented once Covid-situation in the host country enables".

In compliance with section B.7.1 of the VPA-DD, continuous hygiene outreach was conducted at GivePower sites in 2022 among users purchasing water, which fulfilled the annual hygiene campaign requirement in section B.7.3. However, a substantial end-user list was not compiled during this period. Similarly, in 2024, WASH gatherings in group sessions did not have enough attendees to create adequate user lists for sampling.

It was suggested that the annual monitoring for the monitoring period should remain valid despite the deviation from the VPA-DD. It was stated that sampling will adhere to section B.7.2 of the VPA-DD when enough users are present at future WASH gatherings.

This was confirmed by gold standard in which "PD shall be exempted from the requirement of monitoring survey as mentioned in the VPA-DD. However, this shall not be considered as a precedent for the future monitoring periods. PD shall follow the VPA-DD monitoring plan and shall select end users from the project user database using the random selection process outlined in the monitoring plan, for future monitoring periods."

DEV_664 - Deviation request was approved on 27/04/2024. The deviation refers to the annual monitoring surveys conducted in 2022, where the total sample size failed to reach of the minimum requirement of 100.

Additionally, a second deviation was requested for annual monitoring activities covering period 1 (01/01/2022 – 31/12/2022) and period 2 (01/01/2023 - 31/12/2023). In period 1, most annual monitoring surveys were conducted within the 12-month period, with a final completion date of 09/01/2023. In period 2, the annual monitoring occurred in March 2024, three months after the end of the annual period.

It was suggested that annual monitoring conducted in March 2024 be applied to the period (01/01/2023 – 31/03/2024). While the number of annual monitoring surveys in 2022 was below the minimum requirement, there was a significant increase to 159 surveys in 2024, surpassing the sampling guidelines and ensuring comprehensive representation across all age groups.

It was proposed to apply the 2022 and 2024 annual monitoring survey results to the monitoring period, with 2022 results applied for 12 months and 2024 results applied for the following 15 months up to 31/03/2024.

This was confirmed by Gold Standard, stating: "PD has been granted exemption for conducting 83 survey samples for the first set of annual monitoring covering the period 01/01/2022 – 31/12/2022." The second deviation was also accepted: "The annual monitoring activities carried out in March 2024 for the year have also been exempted." Gold Standard noted: "PD shall note that this exemption shall not set a precedent for future monitoring periods and surveys, with respect to the minimum total sample size of 100 and at least 30 samples for project technologies from each group. The same guidelines must be followed for the 2024 monitoring and future surveys in line with the TPDDTEC v3.1 methodology.

E.4.2. Corrections

The Verification Team reviewed the fNRB report. The report utilizes the CDM Tool 30 EB 108 Annex 11 v3.0 (2020) methodology for calculating fNRB. This assessment was conducted in accordance with the most recent methodological tool, "TOOL 30: Calculation of the Fraction of Non-Renewable Biomass, Version 04.0." The core equations used (fNRB = NRB / (NRB + RB); NRB = H - RB; RB = MAI * (F - P)) are correctly applied and consistent with the CDM Tool 30. The calculation resulted in fNRB value of 0.93, however the PP elected to use 0.92 which is the previous CDM default value for fNRB in Kenya for conservativeness.

[1] Other standards, methodologies, methodological tools and guidelines (to be) applied in accordance with the applied(selected) methodologies are collectively referred to as the other (applied) methodological regulatory documents).

Note: While the assessed report used Tool 30 Version 3.0, there are no significant changes between V3.0 and V4.0 that affect the core methodology or calculations of the fNRB.

Furthermore, a significant correction related to the calculation of greenhouse gas emissions from charcoal consumption was addressed and implemented during this verification period. The approach originally outlined in the VPA-DD, which involved applying a conversion ratio directly to the wood emission factors to derive specific charcoal emission factors, was revised following reviewer feedback to align with methodological principles.

The corrected methodology, as detailed in the Monitoring Report (MR v7, Section B.2.2) and applied in the calculations presented in MR v7 Section E, now involves:

Applying a justified wood-to-charcoal production ratio (4:1, supported by sources including recent ICVCM guidance) to the *quantity* of charcoal consumed (Bb,y,charcoal and Bp,y,charcoal) to determine the equivalent mass of wood required for its production.

Utilizing the standard, approved emission factors (EF) and Net Calorific Value (NCV) specifically for wood in the subsequent calculation of baseline and project emissions attributable to charcoal use.

The VVB has verified that this revised calculation approach is correctly implemented in the final Monitoring Report (MR v7) and the accompanying Emission Reduction calculation sheet (ER sheet v7), ensuring a more accurate and methodologically sound assessment of emissions associated with charcoal."

Parameter Assessment and Validation:

The report's calculations and underlying assumptions have been reviewed for each parameter.

Table 1: Parameter Values and VVB Assessment

Parameter	Value from Report	VVB Assessment	Conclusion on Validity
fNRB	0.92	The calculation (NRB / (NRB + RB)) is correct based on the provided NRB and RB values. The fNRB value is sensitive to input parameters, but the result aligns with expectations for a country with significant woodfuel reliance. The value is also the CDM default for Kenyas.	Valid and Reasonable. The result is within the expected range and aligns with similar studies.

NRB	24,016,992 (t/yr)	Calculated as H - RB. The calculation is correct based on the reported H and RB values.	Valid. The calculation accurately reflects the difference between H and RB.
RB	1,679,513 (t/yr)	Calculated using R software, considering MAI, accessible areas, and protected areas. MAI values are IPCC defaults, weighted by forest stand ages. The 2.5 km accessibility buffer is a reasonable assumption for fuelwood collection based on literature.	Valid. The methodology, including the use of R software and the accessibility buffer, is appropriate and justified. Using IPCC defaults is acceptable in the absence of comprehensive local data.
H	25,696,505 (t/yr)	Calculated based on UN population data and CDM default fuelwood per capita consumption (0.5 t/cap/yr). The report acknowledges this is a conservative approach.	Valid, but Conservative. The methodology is sound, but using the CDM default for fuelwood consumption and excluding charcoal and non-domestic consumption results in a conservative estimate.

Table 2: Methodology Equations and VVB Assessment

Parameter	Methodology Equations	VVB Assessment
NRB	$NRB = H - \text{RB}$	The equation is correct and consistent with CDM Tool 30. The calculation accurately reflects the difference between H and RB.

RB	$RB = \sum(MAIforest,i \times (Fforest,i - Pforest,i)) + \sum(MAIother,i \times (Fother,i - Pother,i))$	The equation is correct and consistent with CDM Tool 30. The application involves complex geospatial analysis using R software, which is appropriate for this type of calculation. The use of IPCC default MAI values and the accessibility buffer are justifiable in the absence of comprehensive local data and considering typical fuelwood collection patterns. The methodology aligns with the requirements of the CDM Tool 30.

Table 3: Parameter Specific VVB Assessment

Parameter	VVB Assessment	Conclusion on Validity
H (tons)	The methodology is valid, using population data and per capita consumption. The report acknowledges the conservative approach of using the CDM default value and excluding charcoal and non-domestic consumption.	Valid, but Conservative. The approach is methodologically sound, but the result is a conservative estimate due to the acknowledged limitations.
HW (tons per capita per year)	The report uses the CDM default of 0.5 t/cap/yr. While this is a simplification, it is a recognized value within the CDM framework.	Valid within the CDM Context. Using the default is acceptable, although it is likely an underestimation of actual consumption.

CE (tons-wood/year)	The report sets CE to zero, due to unavailability of data, acknowledging this as conservative.	Conservative, but Acceptable. In the absence of readily available data, setting CE to zero is a conservative but justifiable approach within the context of the assessment.
NE (tons-wood/year)	The report sets NE to zero due to a lack of data, acknowledging this as conservative.	Conservative, but Acceptable. Similar to CE, setting NE to zero is a conservative but justifiable approach in the absence of readily available data.
N (Number)	The report uses UN Statistics Division 2018 population data.	Valid. UN data is a standard and reliable source for population figures.
MAI	The report uses default age-weighted MAI estimates from the IPCC.	Valid. Using IPCC defaults is acceptable when detailed local data is unavailable. The methodology for age-weighting is described and appropriate.
F	The report uses Hansen/UMD/Google/USGS/NASA spatial data to estimate forest cover.	Valid. This dataset is widely accepted and appropriate for this type of analysis.

P	The report does not specify the exact source of protected area data. The 2.5km from roads is used to determine accessibility, which is a reasonable assumption for fuelwood collection, supported by literature.	Valid, but with a Minor Caveat. The methodology for determining accessible areas is sound and justified. However, the lack of specific information on the source of protected area data is a minor limitation that should be addressed for complete transparency.

The report "Calculation of the fraction of non-renewable biomass (fNRB) Kenya CDM Tool 30 EB 108 Annex 11 v3.0 2020" provides a valid and reasonable calculation of the fNRB for Kenya using the specified CDM methodology. The applied methods are generally sound and consistent with the requirements of CDM Tool 30.

- **Methodology:** The methodology is appropriate and correctly applied.
- **Calculations:** The calculations are accurate based on the input parameters.
- **Data Sources:** The data sources are generally acceptable, although the source for protected area data should be clarified.
- **Assumptions:** The assumptions made, particularly regarding accessibility and the exclusion of charcoal and non-domestic consumption, are conservative but justifiable within the context of the assessment and available data.

The VVB concludes that the calculated fNRB value of 0.93 is a reasonable and valid result based on the methodology and data presented in the report. The report acknowledges the conservative nature of the estimate, particularly regarding the calculation of H. While uncertainties exist, particularly regarding the precise values of MAI and the extent of protected areas, the applied methods are sound, and the result is within the expected range for a country like Kenya with significant reliance on woodfuel. The fNRB value is further supported by the CDM default value for Kenya and aligns with findings from other studies focusing on the region. Therefore, the VVB confirms the validity of the report's findings and considers the fNRB calculation to be a credible representation of the situation in Kenya within the limitations acknowledged in the report. The PP also elected to use the lower fNRB value of 0.92, based on the CDM default value, for the sake of conservativeness in measurement and calculations.

E.4.3. Changes to the start date of the crediting period

N/A

E.4.4. Inclusion of a monitoring plan

N/A

E.4.5. Permanent changes from registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents

N/A

E.4.6. Changes to the project design

N/A

E.4.7. Changes specific to afforestation and reforestation project

N/A

E.5. Compliance of the registered monitoring plan with applied methodologies, applied standardized baselines, and other applied methodological regulatory documents

Means of verification	The verification team checked compliance of project monitoring plan with the applied methodology (TPDDTEC v.3.1).
Findings	The actual procedures followed for monitoring of parameters are checked against the parameters and procedures provided in the applied methodology.
Conclusion	No findings raised during the verification process.

E.6. Compliance of monitoring activities with the registered monitoring plan

E.6.1. Data and parameters fixed ex ante or at renewal of crediting period

Means of verification	The verification team has checked the ex-ante parameters and data stated in section D.1 of MR and compared with sections B.6.2 & B.6.3 of the registered VPA-DDs whether all parameters fixed ex-ante for the crediting period have been applied correctly. Please refer to Appendix 6 for each of the parameters used during the monitoring period.
Findings	No findings were raised during the verification process regarding ex-ante parameters.
Conclusion	The values of ex-ante fixed parameters have been verified from the validated VPA DDs. The same has been crosschecked with the source mentioned in the validated VPA-DDs and found to be consistent. The verification team confirms that the values used/applied are correct and justified. Also, the ex-ante values have been correctly applied in the calculation of emission reductions.

E.6.2. Data and parameters monitored

Means of verification	The verification team has determined whether the registered monitoring plan has been properly implemented and followed by the PP that the monitoring has been carried out in accordance with the registered monitoring plan; and determined whether all parameters including project emission parameters, baseline emission parameters and leakage parameters used for emission reduction calculation stated in the registered monitoring plan are monitored or used appropriately as per the registered PoA-DD and VPA-DD. During the onsite visit interviews, the verification team assessed the water farms and usage survey results and verified the achieved results. During the verification all monitoring parameters listed in Section D.2 of MR were compared with section B.7.1 of the included VPA-DD and of registered PoA-DD have been verified with regard to the: (i) appropriateness of the applied measurement / determination method, (ii) the correctness of the values applied for ER calculation, (iii) the accuracy, and applied QA/QC measures. Please refer to the Appendix 6 for each of the parameters monitored during the monitoring period.
Findings	CL 06, CAR06, & CAR03 were raised during this verification process and closed satisfactorily. Refer to Appendix 4 for more details.
Conclusion	The verification team confirm that the monitoring has been carried out in accordance with the validated VPA-DDs. The monitoring system is in compliance with the information flow for the parameters as mentioned in monitoring plan in validated VPA-DDs. The monitored data for the parameters has been verified by checking the procedure for information flow and found to be complete and consistent.

E.6.3. Implementation of sampling plan

Means of verification	The period for MP2 (GS10987) is 01/01/2022 - 31/03/2024; and annual monitoring has been carried out to ensure relevance and accuracy of data collected. Dates of when surveys were carried out are outlined in Section C of the MR. During the verification all monitoring parameters listed in Section D.2 of MR were compared with section B.7.1 of the included VPA-DDs and registered PoA-DD have been verified with regard to the: (i) appropriateness of the applied measurement / determination method, (ii) the correctness of the values applied for ER calculation, (iii) the accuracy, and applied QA/QC measures. According to the Sampling and surveys for CDM project activities and programmes of activities and related guidelines the sampling plan was determined at the time of project registration and applied during the monitoring period. Sampling method: Simple random sampling method is adopted as the target population is homogeneous. The size of the random sample group is dependent on the methodological requirements and variance of the parameter being monitored to ensure the parameters measured satisfy 90/30 precision (90% confidence interval and 30% margin of error). The methodology states in section 3.1.C.b that the "minimum total sample size is 100" for the Usage Survey, which is matched for the Project Survey too. The 159 Usage and Project Surveys were conducted in this monitoring period, thus meeting the requirement. The random sample group is reselected for every monitoring period to ensure the selection remains random. The PD opted to use default values for parameters monitored by WCFT; no WCFT was conducted during this monitoring period.
Findings	No findings were raised during the verification process regarding the sampling plan.
Conclusion	Verification team concludes the following: •The sample size considered for the parameter (monitored through sample basis) is found to be appropriate •The sampling plan implemented seems to be appropriate. •Through acceptance sampling, the verification team confirmed that all the data collected by PP through sample survey are correct. No error found.

E.7. Compliance with the calibration frequency requirements for measuring instruments

Means of verification	N/A
Findings	N/A
Conclusion	N/A

E.8. Assessment of data and calculation of emission reductions or net removals

E.8.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks

Means of verification	The verification team has checked whether calculations of baseline GHG emissions calculation have been carried out in accordance with the formulae and methods described in the registered monitoring plan. In detail, the following has been verified: Transparency: It has been checked whether the calculation of baseline emissions is fully traceable and, where used, the Excel calculation provides all calculation formulae. Parameter consistency: It has been checked whether all internal and external parameters and data used for the calculation are applied consistently in the monitoring report and the calculation spread sheet. Correctness: It has been checked whether the applied formulae and methods for calculating baseline emissions are in accordance with the monitoring plan and the approved methodology.

Completeness: It has been checked whether all calculations are complete and without omissions.

SDG 13 (Climate Action)

CO_2 emission reduction outcome is measured using the VPA's emission reduction calculations.

Baseline Emissions (BEb,y), wood:

$$BEb,y,wood = Bb,y,wood * ((fNRBy * EFb,fuel,co2,wood) + EFb,fuel,nonco2,wood) * NCVb,fuel,wood$$

Baseline Emissions (BEb,y), charcoal:

$$BEb,y,charcoal = Bb,y,charcoal * 4 * ((fNRBy * EFb,fuel,co2,Wood) + EFb,fuel,nonco2,Wood) * NCVb,fuel,wood$$

Where:

BEb,y Emissions for baseline scenario b during the year y in tCO_2e

Bb,y Quantity of fuel consumed in baseline scenario b during year y, in tons, as per by-default factors

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

NCVb,fuel Net calorific value of the fuel that is substituted or reduced (IPCC default for wood fuel, 0.0156 TJ/ton)

EFb,fuel,co_2 CO_2 emission factor of the fuel that is substituted or reduced. 112 tCO2/TJ for Wood/Wood Waste

EFb,fuel,nonco2 Non-CO_2 emission factor of the fuel that is substituted or reduced

"4" represents the production ratio of 4:1, which is applied to calculate the emissions of charcoal to an equivalent quantity of wood.

https://icvcm.org/wp-content/uploads/2025/03/GS_TPDDTEC_v4_2025.pdf

Where:

$$Bb,y = (1 - Xboil) * (1 - Cj) * Nj,y * Wbi,y * (Qpj,y + Qpj,rawboild,y)$$

Where:

Nj,y Number of person days consuming water supplied by the project scenario p through year y

Xboil Proportion of users that would use other non-GHG emitting technologies in absence of project activities

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

Bb,y Quantity of fuel consumed in baseline scenario b during the year y in tons

Qp,y Quantity of safe water in litres consumed in the project scenario p and supplied by project technology per person per day

Qp,rawboil,y Quantity of raw water boiled in the project scenario p per person per day

Wb,y quantity of fuel in tons required to treat water using technologies representative of baseline scenario b during project year y, as per Baseline Water boiling Test

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 (Paccess). The number of persons using each solar desalination plant is determined using the sales database for the project and default values for litres per person per day supplied by the methodology. The percentage of users who already had access to a safe water source was 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):

$$Paccess = Py * (1 - Cj) * Up,y$$

Where:

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

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

Cj 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.

Up,y Usage rate in project scenario p during year y

SDG 5 (Gender Equality)
The average decrease in hours per household in time spent gathering water (Tb,y) will be taken as a contribution towards the SDG target. The baseline parameter for time spent collecting water per household per day is monitored in the baseline project survey. The baseline indicators are detailed in Section E.1 of MR and are as follows:

$$TRy = Tb,y - Tp,y$$

Where:

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

Tb,y Time spent collecting water per household per day prior to project (hours)

Tp,y Time spent collecting water per household per day in project (hours)

SDG 3 (Good Health and Wellbeing)
The outcome for SDG 3 is quantified as the additional number of persons consuming safe water in the project activity compared to the baseline scenario (Psafe). The number of persons using safe water is calculated via the sales record. The percentage of users who were already consuming safe water in the baseline without boiling it (Cj) is determined through the baseline survey and deducted. Additionally, the percentage of users who consumed safe water by boiling it in the baseline (Pb,boil) is deducted. Calculations are as follows:

$$Psafe = Py * (1 - Cj) * (1 - pb.boil)$$

Where:

	Psafe Number of additional persons having access to safe water in the project activity compared to the baseline scenario. Py Number of persons having access to safe water in the project activity. Cj 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. Pb,boil Percentage of persons boiling water for purification in the baseline scenario.
Findings	CAR02 was raised during the verification process and closed satisfactorily. Refer to Appendix 4 for more details.
Conclusion	The verification team confirms the following: • The calculations of baseline GHG emissions have been carried out in accordance with the equations and methods described in the registered monitoring plan and applied methodology. • The emission factor applied is an ex-ante value valid for the fixed crediting period. • Any assumptions used in emission or removal calculations have been justified. • Appropriate emission factor and other reference values have been correctly applied. It can be confirmed that the baseline calculation is overall correct. • The SDGs calculation sheet provided is clear, transparent and the calculations provided in the sheet are reproducible. • Hence, the baseline emission reported in the monitoring report for the monitoring period is verified to be correct.

E.8.2. Calculation of project GHG emissions or actual net anthropogenic GHG removals by sinks

Means of verification	The verification team has checked whether calculations of project GHG emissions calculation have been carried out in accordance with the formulae and methods described in the registered monitoring plan. **SDG 13 (Climate Action):** CO_2e emission reductions are the indicator to demonstrate that the project has raised capacity for effective climate change-related planning and management contributing to SDG 13. The emissions reductions for the current monitoring period can be found in the corresponding Emission reductions excel document and section E.4. of the MR. Wood: $$PEp,y,wood = Bp,y,wood * ((fNRBy * EFp,fuel,co2,wood) + EFp,fuel,nonco2,wood) * NCVp,fuel,wood$$ Charcoal: $$PEp,y,charcoal = Bp,y,charcoal * 4 * ((fNRBy * EFp,fuel,co2,wood) + EFp,fuel,nonco2,wood) * NCVp,fuel,wood$$ 4" represents the production ratio of 4:1, which is applied to calculate the emissions of charcoal to an equivalent quantity of wood. https://icvcm.org/wp-content/uploads/2025/03/GS_TPDDTEC_v4_2025.pdf

The project estimate of the other SDGs has been determined as follows:

Outcomes for SDG 3 (Good Health and Wellbeing):
VPAs are premised on generating Emission Reductions by ensuring that water point users have safe water, thereby removing the need for them to burn non-renewable biomass in order to boil water to purify it. Emission reductions are also claimed through the principle of suppressed demand, meaning that some users lacked the resources, time or information necessary to purify their water prior to the project, which was assessed through directed questions in the surveys during the physical site visit.

Therefore, the users for whom ERs are claimed through suppressed demand were forced to use unsafe water for drinking, food preparation and basic personal hygiene prior to the project.

The outcome for SDG 3 is quantified as the additional number of persons consuming safe water in the project activity compared to the baseline scenario (Psafe). Calculations are as follows:

$$Psafe = Py * (1 - Cj) * (1 - Pb, boil)$$

Where:
Psafe Number of additional persons consuming safe water in the project activity compared to the baseline scenario.

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

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

Pb, boil Percentage of persons boiling water for purification in the baseline scenario.

Outcomes for SDG 6 (Clean Water and Sanitation):

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. Calculations are as follows:

$$Paccess = Py * (1 - Cj) * Up, y$$

Where:

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

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

Cj 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.

Up,y Usage rate in project scenario p during year y

Outcomes for SDG 5 (Gender Equality):

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

$$TRy = (Tb, y - Tp, y)$$

Where:

	TRy Total reduction time spent collecting water per day for project activity in year y (hours) Tb,y Baseline time spent collecting water per household per day (hours) Tp,y Project time spent collecting water per household per day (hours)
Findings	CL06 & CAR02 were raised during the verification process and closed satisfactorily. Refer to Appendix 4 for more details.
Conclusion	The verification team confirms the following: • The calculations of project GHG emissions have been carried out in accordance with the equations and methods described in the registered monitoring plan and applied methodology. • The emission factor applied is an ex-ante value valid for the fixed crediting period. • Any assumptions used in emission or removal calculations have been justified. • Appropriate emission factor and other reference values have been correctly applied. It can be confirmed that the baseline calculation is overall correct. • The SDGs calculation sheet provided is clear, transparent and the calculations provided in the sheet are reproducible. Hence, the project emission reported in the monitoring report for the monitoring period is verified to be correct.

E.8.3. Calculation of leakage GHG emissions

Means of verification	The potential sources of leakage listed in the methodology have been investigated, and addressed below: a) The displaced baseline technologies are reused outside the project boundary in place of lower emitting technology or in a manner suggesting more usage than would have occurred in the absence of the project. In all cases the baseline technologies displaced are traditional technologies; these have little to no market value. Their distribution throughout Kenya as a whole is already established - which means the potential for displacement is minimal as traditional baseline technologies will not be reused outside the project boundary. This leakage source can therefore be discounted. b) The non-renewable biomass or fossil fuels saved under the project activity are used by non-project users who previously used lower emitting energy sources. There is no evidence to suggest significant (if any) use of renewable energy for purifying water in the project region as found in the Baseline Water Surveys. As solar purification devices are not used, renewable energy used for purifying water would likely be animal dung or crop residues which will be used due to ease of availability/proximity to the home rather than due to a shortage of wood fuel, therefore it is an independent factor. This leakage source can therefore be discounted. c) The project significantly impacts the NRB fraction within an area where other CDM or VER project activities account for NRB fraction in their baseline scenario. As the majority of participants collect wood or buy charcoal from within the project boundary, it is not expected that the NRB in other areas will be affected. d) The project population compensates for loss of the space heating effect of inefficient technology by adopting some other form of heating or by retaining some use of inefficient technology. The space heating effect of boiling water for purification purposes will be minimal, as the predominant use of baseline technology is for cooking. Therefore, it is highly unlikely that another technology will be used for heating when users no longer boil water. e) By virtue of promotion and marketing of new technology with high efficiency, the project stimulates substitution within households who commonly used a

	technology with relatively lower emissions, in cases where such a trend is not eligible as an evolving baseline. The project removes the need to boil water to purify. Therefore, the point regarding efficiency is null and this leakage source can be discounted. It was found 3.14% of Annual Monitoring 2024 respondents boil GivePower water. As such, this has been accounted for in the leakage applied to the project. Following assessment of the Annual Monitoring Surveys 2022 and 2024, a conservative value of 5% leakage has been applied. The project has the option of a back-up diesel generator on some of the "older" project sites to ensure consistent functionality of the system. Rigorous data analysis of the generator's usage rate has concluded that only two sites have recorded its usage in this monitoring period (Likoni and Kitengela). During the monitoring period Kitengela recorded a generator usage of 30.03 mWh and Likoni 11.80 mWh. After applying an emission factor of 0.6 tCO_2e per mWh (Climate Change Compass, 2018) to the total mWh usage per site, an overall generator usage rate of 25 tCO_2e throughout the monitoring period was calculated. This has been deemed insignificant in regard to the total scale of the project. Leakage risk is considered low and a conservative value of 5% leakage is deemed appropriate.
Findings	CL08, CAR05, CAR06 & CAR07 was raised during the verification process and closed satisfactorily. Refer to Appendix 4 for more details.
Conclusion	The verification team has: • Investigated the reuse of old technology and confirmed that the old methods for water purification were not being reused elsewhere, ruling out this source of leakage. • Checked for the use of saved fuel in other areas and determined that people were not using alternative fuels that could be impacted, eliminating this leakage possibility. • Analyzed the project's influence on other projects and found that the project's localized fuel sourcing meant it wouldn't affect other projects, preventing this type of leakage. • Assessed the need for alternative heating methods and established that the old water purification method didn't provide significant heat, so people wouldn't need to replace it, removing this leakage concern. • Examined the potential shift from cleaner methods and confirmed that the project only replaced boiling water, so there's no leakage (except for a small amount from people who boiled the already clean water, which they factored in). Furthermore, the verification team analyzed the usage of a backup diesel generator and found it to be minimal. Taking all of this into account, the verification team determined a 5% leakage rate to be appropriate. The leakage assessment has been carried out in line with the applied methodology (TPDDTEC v.3.1) and found no leakage emissions during the monitoring period.

E.8.4. Summary calculation of GHG emission reductions or net anthropogenic GHG removals by sinks

Means of verification	Section E.4 of MR demonstrate the summary of GHG emission reductions for the monitoring period and calculated according to the applied methodologies as follows: When the baseline fuel and the project fuel are the same and the baseline emission factor and project emission are considered the same, the overall GHG reductions achieved by the project activity in year y are calculated as follows: Emission Reductions:

	$$ERy = ((BEb,y - PEp,y) * Up,y - LEp,y) * (1 - Xboil)$$ Where: $$BE_{b,y} = B_{b,y} * \left(\left(fNRB_y * EF_{b,fuel,co2}\right) + EF_{b,fuel,nonco2}\right) * NCV_{b,fuel}$$ And: $$B_{b,y} = \left(1 - C_j\right) * N_{p,y} * W_{b,y} * \left(Q_{p,y} + Q_{p,rawboil,y}\right)$$ Where: $$PE_{p,y} = B_{p,y} * \left(\left(fNRB_y * EF_{p,fuel,co2}\right) + EF_{p,fuel,nonco2}\right) * NCV_{p,fuel}$$ And: $$B_{p,y} = \left(1 - C_j\right) * N_{p,y} * W_{p,y} * \left(Q_{p,rawboil,y} + Q_{p,cleanboil,y}\right)$$ Emission reductions (tCO_2e) 2022 (1/1/2022 – 31/12/2022): 15,917 2023 (1/1/2023 – 31/1/2023): 26,982 2024 (1/1/2024 – 31/3/2024): 7,951 Total emission reduction: 50,850
Findings	FAR03 was raised during the previous verification process, request was closed satisfactorily by verification team after verifying the compliance of this FAR. Refer to Appendix 4 for more details.
Conclusion	The verification team confirms the following: • The emission reduction value reported (ie, 67,465 tCO_2e) is verified to be correct. • The summary table in the MR has been filled correctly and the values are in line with the related emissions reduction spread sheet.

E.8.5. Comparison of actual GHG emission reductions or net anthropogenic GHG removals by sinks with estimates in registered PDD

Means of verification	The verification team has checked whether the MR includes a comparison of actual values of the monitoring period with the estimations in the validated VPA-DDs. The MR includes a comparison of the calculated actual emission reductions with the ex-ante calculated values in the validated VPA-DDs. The actual achieved emission reduction is less than estimated emission reduction mentioned in the VPA-DDs.
Findings	No findings were raised during the verification process.
Conclusion	SDG / Values estimated in ex-ante calculation of approved PDDs / Actual values achieved during this monitoring period 13 / 2022=60,000 tCO_2e 2023=60,000 tCO_2e 2024=15,000 t tCO_2e Total: 135,000 tCO_2e / 2022= 15,917 tCO_2e 2023= 26,982 tCO_2e 2024= 7,951 tCO_2e Total: 50,850 tCO_2e 3 / 2022=62,775 2023=62,775 2024=62,775 / 2022=28,454 2023=37,022 2024=44,415 5 / 2022=0.5 2023=0.5 2024=0.5 / 2022=2.15 2023=2.23 2024=2.23 6 / 2022=75,330 2023=75,330 2024=75,330 / 2022=26,756 2023=39,388 2024=47,254 The estimated emission reduction as per validated VPA-DDs and the actual emission reduction achieved for the monitoring period are correctly reported in the MR. The actual achieved emission reduction for all VPAs are less than the VPA-DDs estimation. Hence no justification is required.

E.8.6. Remarks on difference from estimated value in registered PDD

Means of verification	The verification team has determined the VERs achieved during this monitoring period with the estimated values and reason for increase, if any.

Findings	CL01, CL07, CL03 & CAR03 were raised during the verification process and closed satisfactorily Refer to Appendix 4 for more details.
Conclusion	The actual achieved emission reductions are less than the VPA-DDs estimation. Hence no justification is required.

E.9. Assessment of reported sustainable development co-benefits

Means of verification

The sustainable development goals and their outcome are transparently discussed under section E.5.1 of the Monitoring report, The verification team has checked and reviewed the MR with supportive evidence and found the details to be correct. The choice of SDGs is in line with the latest approved PoA-DD.

The project is achieving several sustainable development co-benefits and will monitor them through identified parameters as follows:

Sustainable Development Goals Targeted	Most relevant SDG Target	SDG Impact Indicator (Proposed or SDG Indicator)
SDG 3 – Good Health and Wellbeing	3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	Indicator 3.9.2: Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services)
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.	- Total project emissions reductions - 13.b.1 Number of least developed countries and small island developing States with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change

The verification team, through means of document review, physical interviews, and cross-checking with other projects, has examined the applicability of the approaches for measuring the above-mentioned SDG outcomes as specifically demonstrated in the VPA-DD section B.6.1.

The approach is deemed satisfactory and sufficient to include these SDGs as sustainable development co-benefits for this project.

The initial annual average estimations for the SDGs for the GS10987 are as follows:

Sustainable Development Goals Targeted	SDG Target and Indicator	SDG Impact (defined in E.5)	Annual Average	Units or Products
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. 3.9.2 - Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to	Number of additional persons consuming safe water in the project activity compared to the baseline scenario	2022: 28,454 2023: 37,022 2024: 44,415	Number of People
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	Reduction in time spent collecting water per day	2022: 2.15 2023: 2.23 2024: 2.23	Hours

	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	Number of additional persons having access to safe water in the project activity compared to the baseline scenario	2022: 26,756 2023: 39,388 2024: 47,254	Additional people with access to safe water
	13 Climate Action (mandatory)	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	Total project emissions reductions	2022: 15,917 2023: 26,982 2024: 7,951	tCO_2e (VERs)
Findings	CAR02 was raised and closed satisfactorily. Refer to Annex 04 of this report for further details.				

Conclusion	The verification team confirms that: •Project will result in contributions to SDGs 3, 5, 6, & 13, and the PP has mentioned the contribution of the project towards these SDG's clearly in the MR.

SECTION F. Internal quality control

The draft verification report prepared by the team leader is reviewed by an independent technical reviewer (having competence of relevant technical area himself/herself or through an independent technical area expert) to confirm the internal procedures established by Ampere are duly followed and the verification report/opinion is reached in an objective manner and complies with the applicable Gold Standard & CDM requirements.

The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team are independent of the verification team. The independent technical reviewer(s) may approve or reject the draft verification report. The findings may be identified even at this stage, which needs to be satisfactorily resolved, before submitting final report to Client/Gold Standard. The final approval decision is taken by the Approver of Ampere.

The final decision is authorized by the Approver of the VVB, once the report is finalized by the Verification team.

SECTION G. Verification opinion

The verification team confirms that the evidence is of sufficient quantity, appropriate quality and reliable. The reported values, notation, units and sources in the monitoring report for all the monitoring parameters have been cross checked with the emission reduction sheet and monitoring report.

During the course of verification and onsite visit, the data submitted by PP was cross-verified with the values mentioned in the emission reduction sheet and monitoring report. The procedure for data monitoring, recording, transfer and compilation was also verified and found in compliance with the monitoring plan as mentioned in the registered PoA-DD & VPA-DDs and is in line with GS4GG guidelines and requirements.

Evidences (Documents/interview/site visit) referred for verification of individual monitoring parameter and fixed parameters are defined in Appendices 5 & 6 below. It is confirmed by the assessment team that the reported emission reductions have been conservatively calculated. A list of referred documents for verification is also included in Appendix 3 of this report.

Based on the information seen and evaluated we confirm that the implementation of the project has resulted in 15,917 tCO2e (2022), 26,982 tCO2e (2023), and 7,951 tCO2e (2024) of emission reductions during the period 01/01/2022- 31/3/2024 (including both days).

Positive opinion

SECTION H. Certification statement

Ampere has performed the 2nd periodic verification of the registered GS Project Activity "GS10987 GivePower Kenya Solar Water Farms."

The verification team assigned by Ampere concludes that the project activity as described in the VPA-DD and the Monitoring report meets all relevant requirements of the Gold Standard. The verification has been conducted in line with the GS4GG requirements project activities.

Verification methodology and process

The Verification team confirms the contractual relationship signed between the VVB, Ampere and the Project Participant. The team assigned to the verification meets Ampere's internal procedures including the UNFCCC/GS requirements for the team composition and competence. The verification team has conducted a thorough contract review as per UNFCCC and Ampere's procedures and requirements.

The verification has been performed as per the requirements described in the GS4GG and constitutes the review and completion of the following steps:
- Reviewing the VPA-DD, including the monitoring plan and the corresponding validation report;
- Reviewing the previous verification report and monitoring report;
- Desk review of the MR and other relevant documents including documents related to the project

activities in emission reductions;
- Review of the applied monitoring methodology "Technologies and Practices to Displace Decentralized Thermal Energy Consumption" Version 3.1;
- On-site inspection (10/06/2024 - 14/06/2024)
- Resolution of CARs and CLs raised during verification
- Resolution of raised FARs
- Issuance of Verification Report

The project activity was correctly implemented according to the selected monitoring methodology, monitoring plan, and the registered VPA-DD. The monitoring system was installed, maintained in a proper manner, while collected monitoring data allowed for the verification of the amount of achieved GHG emission reductions.

Through the document review, the verification team confirms that the project activity has resulted in 15,917 tCO2e (2022), 26,982 tCO2e (2023), and 7,951 tCO2e (2024) which accumulates a total of 50,850 tCO2e emission reductions during the reported monitoring period.

This statement covers the verification period from 01/01/2022 - 31/03/2024 (including both the dates).

Ampere has raised 08 clarifications, 09 corrective action requests, all of which are raised and closed successfully. Ampere did not raise any forward action requests during this monitoring period.

Ampere, the VVB, considers necessary to give reasonable level of assurance that reported GHG emission reductions and achieved SDG impacts were calculated correctly on the basis of the approved baseline and monitoring methodology and the monitoring plan contained in the registered VPA-DD, and are fairly stated as the below table.

SDG	Actual values achieved during this monitoring period (1/1/2022 – 31/03/2024)
13	Total: 50,850 tCO_2e
3	2022=28,454 2023=37,022 2024=44,415
5	2022=2.15 2023=2.23 2024=2.23
6	2022=26,756 2023=39,388 2024=47,254

Ampere, hereby certifies that the project activity achieved emission reductions by sources of GHG equal to 50,850 tCO_2e and all monitoring requirements have been fulfilled and are substantiated by an audit trail that contains evidence and records.

Vintage	VERs (tCO_2e)
01/01/2022 – 31/12/2022	15,917
01/01/2023 – 31/12/2023	26,982
01/01/2024 – 31/03/2024	7,951
Total for the monitoring period	50,850

Appendix 1. Abbreviations

Abbreviations	Full texts
Ampere	Ampere for Renewable energy
BE	Baseline Emissions
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CH^4	Methane
CL	Clarification Request
CME	Coordinating/Managing Entity
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CTF	Carbon Transfer Form
DVR	Draft Verification Report
EB	CDM Executive Board
EF	Emission Factor
ER	Emission Reduction
FA	Final Approval
FAR	Forward Action Request
FVR	Final Validation/Verification Report
GHG	Greenhouse gas(es)
GWh	Giga Watt Hour
GS	Gold Standard
GS4GG	Gold Standard for Global Goals
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
LE	Leakage Emissions
MP	Monitoring Period
MR	Monitoring Report
NA	Not Applicable
OSV	On Site Visit
PE	Project Emissions
PoA	Programme of Activities
PP(s)	Project Participant(s)
PRC	Post registration change
PS	Project Survey
PTD	Project Technology Days
QC/QA	Quality Control/ Quality Assurance
RCF	Repair Confirmation Form
TA	Technical Area
TR	Technical Review
UNFCCC	United Nations Framework Convention on Climate Change
US	Usage Survey
VER	Verified Emission Reduction
VPA	Voluntary Project Activity
VVS	Validation and Verification Standard
VVB	Validation & Verification body
WCFT	Water Consumption Field Test
WQT	Water Quality Test

Appendix 2. Competence of team members and technical reviewers

Ampere

Ampere for Renewable Energy

Certificate of Competency for Gold Standard Validation/Verification

Yehya Abdellatif

has been deemed qualified for validation/verification activities under Gold Standard through Ampere's internal qualifications procedures in accordance with the requirements of the standard:

for the following functions and requirements:

☒ Validator	☒ Verifier	☒ Team Leader	☒ Technical Expert
☒ Technical Reviewer	☐ Financial Expert	☒ Local Expert (for Jordan & USA)	☒ SDG+

in the following technical areas:

☐ TA 1.1	☐ TA 1.2	☐ TA 2.1	☐ TA 2.2	☒ TA 3.1
☐ TA 4.1 to 4.n	☐ TA 5.1	☐ TA 11/12.1	☒ TA 6.1	☒ TA 7.1
☐ TA 8/10.1	☐ TA 8/10.2	☐ TA 9.1	☐ TA 13.1	☐ TA 13.2
☐ TA 14.1	☐ TA 15.1			

Issue Date
20/03/2024

Expiry Date
19/03/2025

Eng. Ahmad Qadry
Technical Manager

شركة أمبير للطاقة المتجددة
AMPERE
Ampere For Renewable Energy

Ampere

Ampere for Renewable Energy

Certificate of Competency for Gold Standard Validation/Verification

Ahmad Sarhan

has been deemed qualified for validation/verification activities under Gold Standard through Ampere's internal qualifications procedures in accordance with the requirements of the standard:

for the following functions and requirements:

☒ Validator	☒ Verifier	☐ Team Leader	☒ Technical Expert
☐ Technical Reviewer	☐ Financial Expert	☒ Local Expert (for Jordan & USA)	☒ SDG+

in the following technical areas:

☐ TA 1.1	☒ TA 1.2	☐ TA 2.1	☐ TA 2.2	☒ TA 3.1
☐ TA 4.1 to 4.n	☐ TA 5.1	☐ TA 11/12.1	☒ TA 6.1	☐ TA 7.1
☐ TA 8/10.1	☐ TA 8/10.2	☐ TA 9.1	☐ TA 13.1	☐ TA 13.2
☐ TA 14.1	☐ TA 15.1			

Issue Date
18/06/2024

Expiry Date
17/06/2025

Eng. Ahmad Qadry
Technical Manager

Ampere

Ampere for Renewable Energy

Certificate of Competency for Gold Standard Validation/Verification

Yohannes Aemro

has been deemed qualified for validation/verification activities under Gold Standard through Ampere's internal qualifications procedures in accordance with the requirements of the standard:

for the following functions and requirements:

☐ Validator	☐ Verifier	☐ Team Leader	☒ Technical Expert
☐ Technical Reviewer	☐ Financial Expert	☒ Local Expert	☐ SDG+

in the following technical areas:

☐ TA 1.1	☒ TA 1.2	☒ TA 2.1	☐ TA 2.2	☒ TA 3.1
☐ TA 4.1 to 4.n	☐ TA 5.1	☐ TA 11/12.1	☐ TA 6.1	☐ TA 7.1
☐ TA 8/10.1	☐ TA 8/10.2	☒ TA 9.1	☐ TA 13.1	☐ TA 13.2
☐ TA 14.1	☐ TA 15.1			

Issue Date
13/4/2024

Expiry Date
13/4/2025

Eng. Ahmad Qadry
Technical Manager

Ampere

Ampere for Renewable Energy

Certificate of Competency for Gold Standard Validation/Verification

Srikanth Meesa

has been deemed qualified for validation/verification activities under Gold Standard through Ampere's internal qualifications procedures in accordance with the requirements of the standard:

for the following functions and requirements:

☒ **Validator**	☒ **Verifier**	☒ **Team Leader**	☒ **Technical Expert**
☒ **Technical Reviewer**	☐ **Financial Expert**	☒ **Local Expert (for India)**	☒ **SDG+**

in the following technical areas:

☒ **TA 1.1**	☒ **TA 1.2**	☐ **TA 2.1**	☐ **TA 2.2**	☒ **TA 3.1**
☐ **TA 4.1 to 4.n**	☐ **TA 5.1**	☐ **TA 11/12.1**	☐ **TA 6.1**	☐ **TA 7.1**
☐ **TA 8/10.1**	☐ **TA 8/10.2**	☐ **TA 9.1**	☒ **TA 13.1**	☐ **TA 13.2**
☐ **TA 14.1**	☐ **TA 15.1**			

Issue Date
01/01/2024

Expiry Date
31/12/2024

Eng. Ahmad Qadry
Technical Manager

Appendix 3. Documents reviewed or referenced

No.	Title
1	Monitoring report (version 1, dated 10/05/2024) Monitoring report (version 2, dated 01/08/2024) Monitoring report (version 3, dated 27/09/2024) Monitoring report (version 4, dated 20/11/2024) Monitoring report (version 5, dated 13/01/2025) Monitoring report (version 6, dated 19/02/2025) Monitoring report (version 7, dated 26/03/2025)
2	Emission Reductions Excelsheet (version 2, dated 10/05/2024) Emission Reductions Excelsheet (version 3, dated 01/08/2024) Emission Reductions Excelsheet (version 4, dated 27/09/2024) Emission Reductions Excelsheet (version 5, dated 06/11/2024) Emission Reductions Excelsheet (version 6, dated 19/02/2025) Emission Reductions Excelsheet (version 7, dated 26/03/2025)
3	• Project Survey conducted for this monitoring period , dated 14/05/2024 • Usage Survey conducted for this monitoring period, dated 14/05/2024 • Treated water quality tests , dated 11/08/2024 • Hygiene Campaign, dated 11/08/2024 • Grievance Register, dated 06/11/2024 • Sales Records 2022, 2023, 2024, dated 06/11/2024
4	Carbon Transfer Form – CTFs
5	PoA-DD GS7591 Version 7 dated 09/06/2021
6	GS7591_Design Change FVR_clean, dated 10/06/2021
7	Kenya fNRB Calculation Sheet v2, dated 07/2021
8	WASH trainings sessions records (2022, 2023 & 2024)
9	Meter technological specifications
10	Water Quality Tests (2022, 2023 & 2024)
11	CDM- TOOL 30- Calculation of the fraction of non-renewable biomass EB 108, Annex 11 (Version 3.0) – 2020
12	Previous Verification Report for GS10987 "GS10987_GS10987_MR_MP1_v8.1_CL" dated 02/08/2022
13	Repair Maintenance Forms
14	Contract between Ampere and CO2balance UK Ltd / Vita Ireland
15	Grievance Log- books from site assessment, dated June 11
16	Random Samples for PS, US
17	Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 3.1
18	a. GS4GG Principles & Requirements, version 1.2 b. GS4GG Safeguarding principles & requirements, version 2.1 c. GS4GG Programme of activity requirements, version 2.1 d. GS4GG Community services activity requirements, version 1.2 e. GS4GG Design Change Requirements, version 1.1 f. GS4GG Site Visit and Remote Audit Requirements and Procedures, version 2.0 g. GS4GG Validation/Verification Body Requirements, version 2.0 h. GS4GG Validation and Verification Standard, version 1.0 GHG Emission Reductions & Sequestration Product Requirements, version 2.4
19	Registered VPA-DD: GS10987 Version 9 dated 15/09/2021 Validation report : GS10987_Validation report-TC, dated 11/09/2021
20	Weblink: 1. http://cdm.unfccc.int/ i. https://www.goldstandard.org
21	Standards: a. Sampling and surveys for CDM project activities and programmes of activities, version 09.0 b. Guidelines for Sampling and Surveys for CDM Project activities and Programme of Activities Version 4.0.

	CDM validation and verification standard for project activities, version 03.0
22	IPCC 2006, volume 2, chapter 1 https://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_1_Ch1_Introduction.pdf
23	IPCC Default emissions factor, EFDB Emission Factor Database https://www.ipcc-nggip.iges.or.jp/public/gl/guidelin/ch1ref3.pdf
24	IPCC Default emissions factor: Non-CO_2 Emissions from Stationary Combustion https://www.ipcc-nggip.iges.or.jp/public/gp/bgp/2_2_Non-CO2_Stationary_Combustion.pdf
25	Rule Update- Application of TPDDTEC methodology to safe water supply. Publication date: 30/06/2022- GS website.

Appendix 4. Clarification requests, corrective action requests and *forward action requests*

Table 1. **FARs from previous Verification:**

Date:	08/07/2024		Raised by:	Team Leader	
Type:	FAR	Number:	1	Reference:	GS10987_CCIPL 1058 FVR (clean)
Team Leader Comment:				**Date:** 08/02/2022	
In accordance with the deviation request dated 14/12/2021, the PD shall assure that the Hygiene campaigns are performed as soon as the country situation allows. The details of the hygiene campaigns shall be checked at the time of the next periodic verification					
Reasoning for not Acceptance or Acceptance and Close Out:					
Deviation "GS10987_DEV_663" has been submitted and approved for the second monitoring period. The following is covered within the deviation: "In compliance with section B.7.1 of the VPA-DD, continuous hygiene outreach was conducted at GivePower sites in 2022 among users purchasing water, which fulfilled the annual hygiene campaign requirement in section B.7.3. However, a substantial end-user list was not compiled during this period. Similarly, in 2024, WASH gatherings in group sessions did not have enough attendees to create adequate user lists for sampling." PD is to provide evidence of WASH activities conducted for 2022 and 2024. FAR#01 is open.					
Project Participant Response :				**Date :** 15/08/2024	
Evidence of WASH in 2022 is provided. For 2022 WASH, end-users were only allowed to collect water provided their containers were to the suitable standard of cleanliness; evidence provided shows WASH areas at the sites where containers are cleaned, and an example video of GivePower staff demonstrating good WASH practice to end-users. *2023 WASH involved group sessions, whereby end-users were invited to sites and were provided training on WASH in addition to the sensitisation occurring in the 2022 example. This enabled more in-depth WASH training. Example sessions from Bamburi, Kiunga, and Mwingi are provided.* *2024 WASH sessions also involved group sessions with end-users invited for in-depth WASH training. WASH report is provided demonstrating the topics and areas covered by the WASH sessions at each site.*					
Documentation Provided as Evidence by Project Participant:					
GivePower WASH training report March 2024 *Kitengela_wash_area_2022.mp4* *Likoni_wash_2022_explainingtocustomerswhytheywantcleanjerrycans.mp4* *Mwingi_2023_WASH_images.pdf* *WASH_2023_Mwingi_video_2023.mp4* *WASH_area_Kitengela_Bamburi_2022.pdf* *WASH_Bamburi_2023_images.pdf* *WASH_Kiunga_2023_images.pdf*					
Reasoning for not Acceptance or Acceptance and Close Out:				**Date:** 18/08/2024	
The PP has provided evidence for WASH training and activities for the years 2022, 2023 and 2024. Upon review of thorough assessment of evidence provided it can be confirmed that WASH activities were conducted in the years 2022, 2023, and 2024 sufficiently to the requirements set in the parameter established form the VPA-DD. ***FAR#1 is Closed***					
Acceptance and Close out by Team Leader: Closed				**Date:** 18/08/2024	

Date:	08/07/2024	Raised by:	Team Leader

Type:	FAR	Number:	2	Reference:	GS10987_CCIPL 1058 FVR (clean)

Team Leader Comment: **Date:** 30/06/2022

As per para 2.1.1 of COVID 19: Interim Measures /28/, project developer may postpone physical stakeholder consultation meetings and the Stakeholder Feedback Round (SFR) for Gold Standard project/POA/VPAs until the COVID-19 situation eases. CME/CPA implementer need to carry out the physical stakeholder consultation meeting and SFR at a later stage as soon as the situation allows. The compliance of this FAR shall be checked at the time of the next periodic verification

Reasoning for not Acceptance or Acceptance and Close Out:

No evidence has been submitted in regards to the Stakeholder Consultation of Stakeholder Feedback Round.
PD is to submit evidence of carrying out physical stakeholder consultation meeting and SFR.
FAR#02 is Open

Project Participant Response : **Date :** 15/08/2024

Closed

The Local Stakeholder Consultation (LSC) was held in Bamburi in March 2022. This involved bringing together various stakeholders such as end users, local and international NGOs, Women's Groups and local officials to discuss the project. The PD has provided evidence of the LSC and documentation of invitation letters and feedback evaluation forms.

Documentation Provided as Evidence by Project Participant:

SFR_Feedbackforms_images.pdf
GivePower Kenya Solar Water Farms Project Summary.pdf
GivePower LSC Invitation Letter.pdf
GivePower_Stakeholder_Consultation_Report.pdf
Invitation Log.pdf
Local Stakeholder Consultation Feedback GivePower Kenya Solar Water Farms.msg

Reasoning for not Acceptance or Acceptance and Close Out: **Date:** 18/08/2024

The PD has submitted their evidence for the Local Stakeholder Consultation including the SCR and supporting documentation. Upon review, the SCR was properly prepared and there is sufficient evidence to support the proper conduct of the Stakeholder Consultation.
FAR#02 is closed

Acceptance and Close out by Team Leader: **Date:** 18/08/2024

Closed

Date:	08/07/2024		Raised by:	Team Leader	
Type:	FAR	Number:	3	Reference:	GS10987_CCIPL 1058 FVR (clean)

Team Leader Comment: **Date:** 30/06/2022

During the 1st verification of the VPA, Verification team need to check supportive document for the methodology requirement "The water in its improved form should be available within 1 km walking/pedaling distance from the households. There is a two-year grace period (from date of registration) for any households falling outside of this distance, however once this period is over these households would not be included in the emission reductions calculation. The compliance of this FAR shall be checked at the time of the next periodic verification.

Reasoning for not Acceptance or Acceptance and Close Out:

PD is to clarify how they addressed households falling outside of 1km distance and whether they have been excluded from the emission reduction calculation.
FAR#03 is Open

Project Participant Response: **Date:** 09/09/2024

PD has provided an ArcGIS file (a cloud-based mapping and analysis solution tool) functioning as an interactive map outlining the GPS locations of the main sites in blue, as well as the resell distribution points (also referred to as kiosks) in red. A buffer in the form of a circle with a 1km radius was added to the map showing that all the project households fall within the 1km distance around each main site and the corresponding project resell distribution points. The buffers clearly outline the high population density within the project areas and verifies that a significant number of households have access to GivePower Water within the 1km range. This is possible due to the aforementioned resell distribution points (kiosks, see image), these are supplied through different methods. These methods are as follows: GivePower bowsers (water tankers) operate per site and distribute water from the main site to remote communities, making safe water available through kiosks. Additionally, locals have set up their own distribution networks through delivery services from manpowered Mkokoteni operators (see image), enabling delivery to communities within the 1km radius of the site. It is extremely unlikely that these deliveries occur outside the 1km range of the main site, since the carts are heavy when loaded with 20+ full jerry cans and distribution occurs by foot. After correspondents with the partner and these operators it is clear that they would not be able to deliver to households further than a kilometre away. This is due to the nature of the delivery process meaning they collect the jerry cans from the households, carry them to the GivePower site to fill-up with safe water and then transport them back to those households they have collected the jerry cans from.

Documentation Provided as Evidence by Project Participant:

Kenya Waterpoints + 1km buffer.ppkx
Mkokoteni.jpg
Kiosk_example.pdf

Reasoning for not Acceptance or Acceptance and Close Out:

The PD has described their approach and elaborated on the accessibility of the water to the local community, the PD has also submitted "Kenya Waterpoints + 1km buffer.ppkx", "Mkokoteni.jpg", and "Kiosk_example.pd" which show the points at which households can access water.

Upon review of the evidence provided and comparing against the methodology "Technologies and Practices to Displace Decentralized Thermal Energy Consumption V3.1" which states: "This methodology allows for project activities to include safe water supply technologies implemented in households, commercial premises e.g. shops and institutional premises e.g. schools, prisons, army camps, refugee camps, offices, etc." the PD's approach is deemed valid as the kiosks are valid water supply points and as per the ArcGIS file provided the area covered is sufficient and accurate to the households claimed. Households interviewed also reported the water as accessible within less than 1km.

FAR#03 is Closed

Acceptance and Close out by Team Leader:	**Date:** 18/08/2024
Closed	

Date:	08/07/2024		Raised by:	Team Leader		
Type:	FAR	Number:	4		Reference:	GS10987_CCIPL 1058 FVR (clean)

Team Leader Comment:	**Date:** 30/06/2022

During the 1st verification of the VPA, a deviation request was approved by the SustainCERT. In accordance with the deviation request, the requirements on the usage rate shall be complied by the PP and other points of the deviation request may be addressed during the next periodic verification

Reasoning for not Acceptance or Acceptance and Close Out:

During the previous monitoring period, the following was listed under "Temporary deviations from the approved Monitoring & Reporting Plan, methodology or standardized baseline":
"Deviation submitted relating to the usage survey was submitted and decision made on 09/09/2021. Usage rate has been set at 90%.
A second Deviation Request Form was submitted on 24/11/2021 and decision made on 14/12/2021. It covered inability to complete the monitoring plan from the VPA-DD, for the parameters below. Also included is the decision reached:
- LEp,y. Conservative approach of 5%
- Upy,. Conservative approach of 90%
- Qp,cleanboil,y. Assumption of 0 accepted
- Tp,y. No SDG 5 claim accepted
- Hygiene Campaign. To be performed as soon as country situation allows
- Qp,rawboil,y. Alternative monitoring arrangements have not been applied during the non-conforming period. This is because page 49 of TPDDTEC v3.1 states
"For the project scenario, projects are allowed to use the default values for water consumption... If the default values are used then (Qp,y + Qp,rawboil,y) in equation 11 [of TPDDTEC v3.1] can be replaced with the default value". The value of Qp,rawboil,y is therefore zero."
The PD is to review and clarify on how the FAR was addressed and how each of the parameters have been updated for the current monitoring period.
FAR#04 is open.

Project Participant Response :	**Date :** 15/08/2024

Temporary deviations from previous monitoring period have been addressed in this current monitoring period:
Leakage: conservative 5% approach applied. Results from the annual monitoring surveys indicate there is no leakage in the project scenario. The only relevant factor from the leakage assessment in section E.3 of the MR relates to section e); there are fewer than 5% of project survey respondents who boil project water, which is accounted for in the applied 5% leakage.

The Usage Rate has been calculated from the Annual Monitoring surveys, addressing this FAR. Values have been updated to 70.90% for 2022 and 80.22% for 2023/2024 annual monitoring.

Qp,cleanboil,y has been calculated from the Annual Monitoring surveys, addressing this FAR. Values were 0% for 2022 and 3.14% for 2023/2024.

TP,y has been calculated from the Annual Monitoring surveys, addressing this FAR.

Hygiene campaigns have been implemented in the monitoring period, addressing this FAR.

As the project is applying default of 4L drinking water per person per day, replacing the need to include a value for Qp,rawboil,y, as per the FAR.

Documentation Provided as Evidence by Project Participant:

[Note to PP: Please provide evidence to the Response above, clearly reference the documentation and indicate documentation name/version and date here- for soft copies, exact names of electronic files and if applicable, active links to the web page; reference to the section(s) and text within the documentation including page number(s) should be provided for easy reference and transparency]

Reasoning for not Acceptance or Acceptance and Close Out:	**Date:** 18/08/2024

The PD has submitted a response covering the requested parameters. Upon review, all parameters mentioned in the deviation request were adequately addressed and updated where necessary in this monitoring period.

FAR#04 is Closed

Acceptance and Close out by Team Leader:	**Date:** 18/08/2024

Closed	

***Table 2.* CLs raised in this Verification:**

Date:	*26/06/2024*		Raised by:	Team Leader	
Type:	CL	Number:	1	Reference:	MR Section B.2.2
Team Leader Comment:				**Date:** *26/06/2024*	
In the MR, PD states "The value for fNRB has been updated from the expired CDM value of 0.92 and is now 0.93, as per Kenya_fNRB Report_20 July 2021." PD is to submit Kenya_fNRB Report_20 July 2021 for review.					
Project Participant Response :				**Date:** 15/08/2024	
The PD has shared the "Kenya_fNRB_Report_20 July 2021 and the according fNRB Calculation Sheet for clarity.					
Documentation Provided as Evidence by Project Participant:					
Kenya_fNRB Report_20 July 2021 *Kenya_fNRB Calculation Sheet_20 July 2021*					
Reasoning for not Acceptance or Acceptance and Close Out:				**Date:** 18/08/2024	
The PD has submitted "Kenya_fNRB Report_20 July 2021" and "Kenya_fNRB Calculation Sheet_20 July 2021". In the VPA-DD "GS10987 GivePower SS-PDD v9_CL", the PD stated that *"Calculation using CDM Tool 30 EB 108 Annex 11 v3.0 yielded an fNRB of 97%. For conservativeness, the project will use the lower now expired default value of 92% found here: https://cdm.unfccc.int/DNA/fNRB/index.html."* *PD is to clarify on why they are no longer applying the conservative value referenced in the VPA-DD.* ***CL#01 is Open***					
Project Participant Response :				**Date:** 09/09/2024	
The conservative value previously used of 92% expired in 2017 (https://cdm.unfccc.int/DNA/fNRB/index.html), therefore the PD deemed it suitable to update the fNRB, with the most up to date value being 93% from the 2021 report. At the time when the VPA-DD was designed certified the calculated value was too high (97%) and thus the only option was to revert to the old CDM default value (92%). The PD considers the 2017 default as too old and thus is using the more up to date value of 93% from the "Kenya_fNRB_Report_20 July 2021".					
Reasoning for not Acceptance or Acceptance and Close Out:				**Date:** 16/09/2024	
The PD has provided their justification for the updated value which is backed up by their fNRB report and calculation sheet. The calculation and value of fNRB selected does not deviate significantly from the value used in the VPA-DD and the measurements and calculations used are reasonably appropriate. ***CL#01 is Closed***					
Acceptance and Close out by Team Leader: Closed				**Date:** 16/09/2024	

Date:	*26/06/2024*		Raised by:	Team Leader	
Type:	CL	Number:	2	Reference:	Monitoring report A.3. Reference of applied methodology
Team Leader Comment:				**Date:** *26/06/2024*	
In MR Template Guide V1.1 Section A.3 Reference of Applied Methodology states "Indicate the exact references (titles, versions and - where applicable – UNFCCC reference numbers) of: i. Selected baseline and monitoring methodologies [e.g. Technologies and Practices to Displace Decentralized Thermal Energy Consumption (version 3.1)] ii. Any methodologies or methodological tools to which the selected methodologies refer, where applicable iii. Any selected standardized baselines, where applicable" In section D.1 of MR under parameter 'fNRB,i,y' PD has mentioned "CDM Tool 30 EB 108 Annex 11 v3.0 2020" has been used. This was not reflected in section A.3 at the MR. PD is to review and clarify on the use of mentioned tool and the use of any other methodological tools within the specified section.					
Project Participant Response :				**Date:** 15/08/2024	
To calculate FNRB CDM Tool 30 EB 108 Annex 11 v3.0 2020 has been used in the report. This has been added to section A.3 of the MR.					
Documentation Provided as Evidence by Project Participant:					
Reasoning for not Acceptance or Acceptance and Close Out:				**Date:** 18/08/2024	
The PD has submitted "GS10987_MR_MP2_v2", in the updated MR, section A.3 was amended to include "CDM Tool 30 EB 108 Annex 11 v3.0 2020" as the only methodological tool used. Upon review, all requirements of section A.3 are sufficiently met by the PD. **CL#02 is Closed**					
Acceptance and Close out by Team Leader: Closed				**Date:** 18/08/2024	

Date:	30/06/2024		Raised by:	Team Leader	
Type:	CL	Number:	3	Reference:	ER calculation sheet – WQT Log sheet
Team Leader Comment:				**Date:** 30/06/2024	

In "GS10987_ERs_MP2_v2" Sheet "WQT Log", the following WQT 'Date of Pass' dates is before the 'Date of Installation':

- Test Q3, Year 2022 (Mokowe)
- Test Q4, Year 2022 (Mtongwe)
- Test Q4, Year 2022 (Mwingi)

PD is to clarify how the mentioned tests were conducted and passed prior to the date of installation of each site.

Project Participant Response :	**Date:** 15/08/2024

Due to the nature of the technology used in this project a long installation process is necessary, as a result tests were conducted as soon as the site was seen fit for purpose in order to open the water point as soon as possible for public usage. The WQTs in Mokowe was only conducted 3 days prior to date of installation, as noted on CTF, however, PD argues that due to the long installation process the water site can be seen as officially open at this point. Similarly, in Mtongwe and Mwingi, the WQTs were conducted nine and ten days prior to the installation date noted on the CTF. Water is tested in accredited laboratories, with tested water collected from sources. Overall, first test were conducted before commissioning of the site in order to determine aquifer water quality properties.
Additionally, Water Quality Tests conducted in Mtongwe and Mwingi were tested again and passed within six months of the installation dates. Mtongwe WQT date is noted as 3rd of January 2023 and Mwingi WQT dated on the 24th of February 2023. PD has uploaded WQTs pdfs.
In the case of Mokowe, a full WQT was conducted within the first six months, however the WQTs on the 7th of February did not meet the required parameters and therefore the ERs will account for these WQT failure days.
All relevant WQTs have been submitted.

Documentation Provided as Evidence by Project Participant:

2022_Q1,2,3&4_WQT-merged.pdf
2023_Q1,2,3&4_WQT-merged.pdf
2024_WQT.pdf

Reasoning for not Acceptance or Acceptance and Close Out:	**Date:** 18/08/2024

The PD has submitted "2022_Q1,2,3&4_WQT-merged.pdf, 2023_Q1,2,3&4_WQT-merged.pdf, and 2024_WQT.pdf" Upon review of the documents submitted and clarification of the PD, the issue has been clarified and PD's approach is appropriate.
CL#03 is Closed

Acceptance and Close out by Team Leader: Closed	**Date:** 18/08/2024

Date:	02/07/2024		Raised by:	Team Leader	
Type:	CL	Number:	4	Reference:	Annual monitoring 2024 - Analysis

Team Leader Comment:	**Date:** 02/07/2024

In "GS10987_Annual_Monitoring_2024_MP2_v2" Sheet "Analysis" usage rate is calculated in Cell BF330 through the average of dry season usage rate from Cell BF328 and rainy season usage rate from Cell BG328. This calculation assumes equal distribution of time among dry and rainy seasons.
PD is to clarify on the number of dry season months and rainy season months in the coastal region of Kenya as well as how this is taken into consideration for the calculation of the usage rate.

Project Participant Response :	**Date:** 15/08/2024

Overall, the climate and weather patterns on the Keyan coastline are dominated by large-scale pressure systems of the Indian Ocean (such as El Nino), with two distinct monsoon seasons (Kotri, 2011; Maingey et al., 2020). The first so called "long rains" are from mid-April to end of June, whilst the "short rains" are to last form November to December (Awuor et al., 2008; Maingey et al., 2020). This indicates annually 5 months can be declared rainy season and 7 months are to be labelled dry season.

Documentation Provided as Evidence by Project Participant:

Reasoning for not Acceptance or Acceptance and Close Out:	**Date:** 18/08/2024

PD has provided clarification to the distribution of dry season months and rainy season months in the region. While PD's explanation simplifies the calculation by assuming an equal distribution of dry and rainy months, this conservative approach, which underestimates water usage during dry seasons, is acceptable for its cautious estimations.
CL#04 is Closed

Acceptance and Close out by Team Leader: Closed	**Date:** 18/08/2024

Date:	26/06/2024		Raised by:	Team Leader	
Type:	CL	Number:	5	Reference:	Annual Monitoring 2022 and 2024

Team Leader Comment:	**Date:** 26/06/2024

GS10987_Annual_Monitoring_2022_MP2_v2 "Analysis" Cell AY97 the total project time spent collecting water per household per week is calculated by adding the measured value for GP project time spent collecting water per household per week from cell AY106 and the Other Source project time spent collecting water per household per week from cell AY115. The value in AY115 was calculated from time spent to collect other source water, and Average OS trips per week. Both these numbers are themselves calculated by subtracting the GP time/trips from the Total time/trips. The total project time spent collecting water per household per week in Cell AY97 should be calculated by multiplying Average water trips per week in Cell AW92 with time to collect water (total) in AW103 for more direct and accurate results. The same applies In GS10897_Annual_Monitoring_2024_MP2_v2, sheet "Analysis" Cell AL171 the total project time spent collecting water per household per week (Tp,y), cell AL181 GP project time spent collecting water per household per week cell AL191 Other Source project time spent collecting water per household per week from, Cell AK194 Average water trips per week, and Cell AJ177 time to collect water (total). PD is to clarify on their approach and calculations for Tp,y
Project Participant Response : **Date:** 15/08/2024
Tp,y calculation has been updated to show total time spent collecting water per trip times by trips per week, in line with the feedback above. Tp,y is simply now total time per trip per total trips in the project scenario.
Documentation Provided as Evidence by Project Participant:
GS10987_MR_MP2_v2 *UPDATED ER CALCS "GS10987_ERs_MP2_v3 "*
Reasoning for not Acceptance or Acceptance and Close Out: **Date:** 18/08/2024
The PD has submitted "GS10987_MR_MP2_v2", "GS10987_ERs_MP2_v3", "GS10897_Annual_Monitoring_2022_MP2_v3", and "GS10897_Annual_Monitoring_2024_MP2_v3". Upon review, the calculation of Tp,y were updated and the point of inquiry was taken into consideration. There is no clear issue in the updated calculation of Tp,y. **CL#05 is Closed**
Acceptance and Close out by Team Leader: **Date:** 18/08/2024 Closed

Date:	*26/06/2024*		Raised by:	Team Leader	
Type:	CL	Number:	6	Reference:	MR section D.2
Team Leader Comment:				**Date:** *26/06/2024*	
In the MR, section D.2, for parameter Tp,y, under Additional Comment, it is stated that "Parameter was not able to be monitored during this monitoring period. No SDG 5 claims are being made this monitoring period." In the MR, section D.2, for parameter Hygiene Campaigns, under Additional Comment, it is stated that "Parameter was not able to be monitored during this monitoring period. Hygiene campaigns will commence once COVID-19 situation eases and conducting gatherings is deemed safe." PD is to clarify on the statements made and their validity for this monitoring period.					
Project Participant Response : **Date:**					
Statements in section D.2 of the MR have been updated to reflect the monitoring period.					
Documentation Provided as Evidence by Project Participant:					
GS10987_MR_MP2_v2					
Reasoning for not Acceptance or Acceptance and Close Out: **Date:** 18/08/2024					
The PD has submitted "*GS10987_MR_MP2_v2", upon review of the parameters Tp,y and Hygiene Campaigns in section D.2 it can be confirmed that the information was updated to reflect the current monitoring period where applicable and that the inconsistencies observed previously are no longer present.* **CL#06 is Closed**					
Acceptance and Close out by Team Leader: **Date:** 18/08/2024 Closed					

Date:	04/07/2024		Raised by:	Team Leader	
Type:	CL	Number:	7	Reference:	MR Section C
Team Leader Comment:				**Date:** 04/07/2024	
In the MR, in section D.4, it states "The total number of people using the safe water produced by the project has been determined through the quantity of water sold, divided by the default value for Qp,y; 4 litres per person per day." Additionally, in the MR, in section D.4, it is stated that "The resellers are independent entrepreneurs who are not GivePower Foundation employees. The project cannot and should not enforce the collection of user lists on water resellers." It was also noted during the Site Assessment that the safe water produced by the project is being sold to entities such as hotels or offices and sold for other uses such as to fill swimming pools. It is unclear whether the number of people using safe water produced by the project entirely reflects HHs for which the baseline scenario applies and whether there are any control measures in place to ensure the number is accurate. PD is to review and clarify.					
Project Participant Response: **Date:** 09/09/2024					
Addressing the swimming pool issue raised during the site-visit our in-country partner has confirmed that "11,000 litres were delivered on a one-time basis on November 15, 2023. This was the only time that water was used for this purpose at any of our sites and the practice has been stopped" (see email evidence). The PD has reiterated to the partner (GivePower) that this is not in the interest of the project and the partner has confirmed and clarified that this does not align with their mission and values and as such shall not reoccur.					

Additionally, we have raised the hotels comment with the partner and want to clarify that this is a misunderstanding as a result of local usage. In Kenya, a pop-up roadside eatery is referred to by the locals as a hotel (please see images attached for reference). The hotel is usually run by an individual who, without our water, would have ended up boiling water to provide safe water to the customers of this eatery. This project (GivePower) does not provide water to "hotels" in the western sense as they all have their own purification operations and provide water to their customer in bottles. *Finally, as provided in the answer for FAR 3, the PD has shared an ArcGIS map to show the households falling with in the project area (1km radius of the sites).* *Overall, the supply to swimming pools is deemed insignificant, whilst the distribution of safe water to hotels is misinterpreted. The PD accounts for a baseline safe water access at 7%, which accounts for water purchased by individuals that already had access to safe water prior to the project being set up.*
Documentation Provided as Evidence by Project Participant:
Hotel_example_images.pdf *GivePower_partner_email_evidence.pdf*
Reasoning for not Acceptance or Acceptance and Close Out:
The PD has provided "*Hotel_example_images.pdf*", and "*GivePower_partner_email_evidence.pdf*" as well as a clarification on use of safe water produced by the project in hotels and swimming pools. Upon review of the above, the misunderstanding regarding the Hotels is acknowledged and the clarification form the PD is accepted, for the water that was sold to the swimming pool, the clarification and action to remove the water used for the swimming pool from calculations, and actively avoid any future occurrence are deemed appropriate and sufficient. ***CL#07 is Closed***

Acceptance and Close out by Team Leader: **Closed**	**Date:** 03/10/2024

Date:	04/07/2024		Raised by:	Team Leader	
Type:	CL	Number:	8	Reference:	MR A.1

Team Leader Comment:	**Date:** 04/07/2024
During Site Assessment, it was noticed that all plants had a backup diesel generator. There is no reference to a backup diesel generator or its use in the VPA-DD and Monitoring Report. PD is to clarify on use of diesel generator in project technology, and its effect on the project calculations.	
Project Participant Response :	**Date:** 09/09/2024
PD has received the diesel generator's usage in kWh for the monitoring period from the in-country partner. As per table 4 in the KPI 6 Methodology Note by Climate Change Compass in cooperation with the UK government (2018), the emission factor (tCO_2e per mWh) for Kenya is 0.6 tCO_2e per mWh. As shown in the calculations in the excel "Generator Data Calc" this was applied to the mWh usage per site (Kitengela 30.03 mWh and Likoni 11.80 mWh). Overall, using the above emission factor the total generators usage was 25 tCO_2e for both sides across the monitoring period, this can be deemed insignificant in regard to the total scale of the project, and the PD will account for it as leakage. The PD has added this to the MR in section E.3. Calculation of leakage. *Additionally, according to the International Energy Agency (IEA) the electricity generated in Kenya can be considered as clean, with 41% of total generation from geothermal energy and 30% from hydro in 2021 (IEA, 2021).*	
Documentation Provided as Evidence by Project Participant:	
Generator data calc.xlsx *KPI-6-Methodology-Note.pdf*	
Reasoning for not Acceptance or Acceptance and Close Out:	
The PD has provided "Generator Data calc.xlsx", "KPI-6-Methodology-Note", as well as maintenance records for the diesel generators in use in both locations. Upon review of the PD's response and documents provided, it can be confirmed that the emissions resulted from the diesel generator are negligible and do not materially affect project functionality. **CL#08 is Closed**	

Acceptance and Close out by Team Leader: **Closed**	**Date:** 03/10/2024

Table 3. **CARs raised in this Verification:**

Date:	26/06/2024		Raised by:	Team Leader	
Type:	CAR	Number:	1	Reference:	MR Section B.1.1

Team Leader Comment:	**Date:** 26/06/2024
As per Monitoring report – Template Guide (V.1.1), section B1.1. Forward Action Requests "Declare any Forward Action Requests from Design Certification (1st Monitoring Period) or previous Performance Certifications and briefly summarise how they have been addressed." FARs from previous verification have been declared, but no summary on how they were addressed was included in the section. PD is to review and rectify with a summary on steps taken to address the FARs from the previous verification.	
Project Participant Response :	**Date:** 15/08/2024
Details on how the FARs have been addressed for this monitoring period have been added to section B.1.1 of the Monitoring Report	
Documentation Provided as Evidence by Project Participant:	
GS10987_MR_MP2_v2	
Reasoning for not Acceptance or Acceptance and Close Out:	**Date:** 18/08/2024

In section B.1.1, under FAR #4, the PD's summary of how the FAR was addressed states "DEV663 and DEV664 have been approved for this current monitoring period relating to the usage rate. The usage rate has been calculated for the monitoring period and applied to the emission reduction calculations." PD is to clarify their statement and how DEV663 and DEV664 relate to the usage rate. **CAR#01 is Open**
Project Participant Response : **Date:** 09/09/2024
Deviation DEV_663 is regarding the sampling approach outlined in the VPA-DD for GS10987, which states that "Individual participants will be selected from the project user database using the random selection process outlined in the monitoring plan". Here the "user list database" was aimed to be collected via WASH gatherings, which commenced once the Covid-19 situation in the host country allowed for it. The 2022 and 2024 monitoring period saw WASH trainings and hygiene campaign commencing; however, participation was insufficient for user list collection. The PD approached a different sampling method to adapt to the circumstances, however, as outlined in the deviation all annual monitoring survey requirements were still met through this approach, despite not being in line with the PDD. The final values obtained from the monitoring surveys remain conservative, as the usage rate was calculated as 70.9% (2022) and 80.22% (2024) for the monitoring period. *Dev_664 similarly relates to the sampling requirements, as these fell short and did not reach the minimum requirement outlined for annual monitoring in 2022. Substantial samples were obtained in 2024, which ensured comprehensive representation across all age groups. A conservative approach was taken when calculating the usage rate, this allowed for an overall accurate approach that is not overstating the usage rate for both periods.*
Reasoning for not Acceptance or Acceptance and Close Out:
The PD has submitted "GS10987_ERs_MP2_v3", and provided their clarification for the response to FAR #4, upon review the summary of how the FAR was addressed is representative of the actions taken by the PD and appropriate as a response to the original finding, and thus the section meets the requirements set and there are no further issues. **CAR#01 is Closed**
Acceptance and Close out by Team Leader: **Date:** 16/09/2024 Closed

Date:	01/07/2024		Raised by:	Team Leader	
Type:	CAR	Number:	2	Reference:	MR - Section E.6. ER Calculation Sheet – SDG Calculation

Team Leader Comment: **Date:** 01/07/2024
In MR, section E.6. Remarks on increase in achieved SDG Impacts from estimated value in approved PDD, for Assessing SDG 6, the number of people for the year 2022 is stated to be 33,200 people in the VPA-DD. The same parameter is calculated as 26,157 in "GS10987_ERs_MP2_v2" PD is to review the inconsistency and rectify as needed.
Project Participant Response : **Date:** 15/08/2024
PD has updated the value in section E.6 of the MR to reflect that 26,157 additional people had access to safe water in 2022.
Documentation Provided as Evidence by Project Participant:
GS10987_MR_MP2_v2
Reasoning for not Acceptance or Acceptance and Close Out: **Date:** 18/08/2024
The PD has submitted "GS10987_MR_MP2_v2", upon review of the parameters Tp,y and Hygiene Campaigns in section D.2 it can be confirmed that the information was updated to reflect the current monitoring period where applicable and that the inconsistencies observed previously are no longer present. **CAR#02 is Closed**
Acceptance and Close out by Team Leader: **Date:** 18/08/2024 Closed

Date:	02/07/2024		Raised by:	Team Leader	
Type:	CAR	Number:	3	Reference:	MR - ER D.2.Data and parameters monitored Quality of Treated Water

Team Leader Comment: **Date:** 02/07/2024
In the MR, section D.2.Data and parameters monitored, parameter "Quality of Treated Water", under QA/QC procedures, PD states "**Period of time between any fail and subsequent pass is removed from ER claims**". However, in ER calculation sheet "GS10987_ERs_MP2_v2", sheet "WQT Log", Q4 of 2023. WQT fail days are only calculated from the date of failure to the end of 2023. Dates between end of 2023 and date of pass in Q1 2024 were not calculated as WQT fail days. PD is to review and rectify calculation to align with QA/QC procedure set.
Project Participant Response : **Date:** 15/08/2024
PD has accounted for the downdays of those tests failed in October 2023, from the end of 2023 to the next passed WQTs noted in 2024. This has been reflected in the 2024 failure days, which is added to the overall MP2 downdays used in the PTDs. The PD has also accordingly adjusted the MR values.
Reasoning for not Acceptance or Acceptance and Close Out: **Date:** 18/08/2024

The PD has submitted "GS10987_ERs_MP2_v3", upon review of the WQT log sheet it can be confirmed that the information was updated to account for downdays between the end of 2023 and the first WQT test of 2024, and thus the inconsistencies observed previously are no longer present. **CAR#03 is Closed**
Acceptance and Close out by Team Leader: **Date:** 18/08/2024 Closed

Date:	04/07/2024		Raised by:	Team Leader	
Type:	CAR	Number:	4	Reference:	MR Key Project Information
Team Leader Comment:				**Date:** 04/07/2024	
In the MR, in Key Project Information, under "Date of Last Annual Report" the date given is "22/12/2021. However, an Annual Report for 2023 has been submitted for the project. PD is to review and rectify with date of latest Annual Report.					
Project Participant Response:				**Date:** 15/08/2024	
PD has updated in the MR with the date of the latest Annual Report (21/12/2023).					
Documentation Provided as Evidence by Project Participant:					
Reasoning for not Acceptance or Acceptance and Close Out:				**Date:** 18/08/2024	
The PD has submitted "GS10987_MR_MP2_v2". In Key Project Information, the "Date of Last Annual Report" was updated to 21/12/2023. The required section was adjusted and the information provided is sufficient. ***CAR#04 is Closed***					
Acceptance and Close out by Team Leader: **Date:** 18/08/2024 Closed					

Date:	04/07/2024		Raised by:	Team Leader	
Type:	CAR	Number:	5	Reference:	MR Section E.1
Team Leader Comment:				**Date:** 04/07/2024	
In the MR, in section E.1, for parameter Bb,y, the following inconsistencies were noticed: Equation is written as "Bb,y = (1 – Cj) * Nj,y * Wi,y * (Qj,y + Qj,rawboild,y" while equation in VPA-DD is written as "Bb,y = (1-Xboil) * (1 - Cj) * Nj,y * Wb,y * (Qb,y + Q b,rawboil,y)" Qby and Qb,rawboil,y for baseline scenario are written as Qpy and Qp,rawboil,y for project scenario in symbol and associated description. PD is to review and rectify.					
Project Participant Response:				**Date:** 15/08/2024	
Equation in section E.1 has been updated to match the VPA-DD.					
Documentation Provided as Evidence by Project Participant:					
GS10987_MR_MP2_v2					
Reasoning for not Acceptance or Acceptance and Close Out:				**Date:** 18/08/2024	
The PD has submitted "GS10987_MR_MP2_v2". In section E.1, for parameter Bb,y the inconsistencies detected were not adjusted in the version of the MR submitted. PD is to review and rectify ***CAR#05 is Open***					
Project Participant Response:				**Date:** 09/09/2024	
PD has rectified this and added a definition for Xboil in the MR section E.1. Equation in section E.1 has been updated to match the VPA-DD.					
Documentation Provided as Evidence by Project Participant:					
GS10987_MR_MP2_v3.docx					
Reasoning for not Acceptance or Acceptance and Close Out:				**Date:**16/09/2024	
The PD has submitted "GS10987_MR_MP2_v3". The PD has updated Bb,y *in section E.1. It can be confirmed that Bb,y equation has been updated to match the mentioned equation in the in registered VPA-DD.* ***CAR#05 is Closed***					
Acceptance and Close out by Team Leader: **Date:**16/09/2024 Closed					

Date:	08/07/2024		Raised by:	Team Leader	
Type:	CAR	Number:	6	Reference:	MR D.2
Team Leader Comment:				**Date:** 08/07/2024	
In the MR, in section D.2, for parameter Up,y and LEp,y it is stated that the source of data is "Deviation" and the measurement methods and procedures are "Conservative assumption". For Up,y "QA/QC procedures" is also left blank. These are not applicable to the current monitoring period. Parameters should be aligned with the Source of data, Measurement methods and procedures, and QA/QC procedures set out in the VPA-DD.					

PD is to review and rectify for the given parameters.
Project Participant Response: **Date:** 15/08/2024
In section D.2 of the MR, source of data for $LE_{p,y}$ has been updated to match the PDD – Project Surveys (as described in the VPA-DD) have been updated to 'Annual Monitoring Survey 2022 and Annual Monitoring Survey 2024'. Additional information added to justify applied $LE_{p,y}$ value. *In section D.2 of the MR, source of data for $U_{p,y}$ has been updated. For Monitoring methods and procedures, the text in the MR is a more accurate reflection of how $U_{p,y}$ is and should be measured. $U_{p,y}$ is a measurement of usage, and the text in the VPA-DD of 'Measured quantities of water sold by the project technologies' is less applicable than the text now provided in the MR.*
Documentation Provided as Evidence by Project Participant:
GS10987_MR_MP2_v2
Reasoning for not Acceptance or Acceptance and Close Out: **Date:** 18/08/2024
The PD has submitted "GS10987_MR_MP2_v2". The PD has updated information for parameters Up,y and LEp,y in section E.1. Upon review of the revised information for each parameter it can be confirmed that they were updated to reflect the current monitoring period and provide a more accurate representation of each parameter. ***CAR#06 is Closed***
Acceptance and Close out by Team Leader: **Date:** 18/08/2024 Closed

Date:	08/07/2024		Raised by:	Team Leader		
Type:	CAR	Number:	7		Reference:	MR E.3

Team Leader Comment: **Date:** 08/07/2024
In the MR, in section E.3, it is stated that "Overall, because the project survey was unable to be completed a conservative 5% leakage score has been assigned. Leakage values are 188.37tCO_2 for wood and 801.765 tCO_2/year for charcoal, totalling 990.135 tCO_2." This information is from the previous monitoring period and is not applicable to the current monitoring period. PD is to review and update with information relevant to the current monitoring period.
Project Participant Response: **Date:** 15/08/2024
PD has addressed this in the MR section E.3.
Documentation Provided as Evidence by Project Participant:
GS10987_MR_MP2_v2
Reasoning for not Acceptance or Acceptance and Close Out: **Date:** 18/08/2024
The PD has submitted "GS10987_MR_MP2_v2". In section E.3, the text was updated to reflect the current monitoring period. The adjustment is appropriate and the information provided is sufficient. **CAR#07 is Closed**
Acceptance and Close out by Team Leader: **Date:** 18/08/2024 Closed

Date:	08/07/2024		Raised by:	Team Leader		
Type:	CAR	Number:	8		Reference:	MR Section C

Team Leader Comment: **Date:** 08/07/2024
In the MR, section C, there are elements of that are not included in the MR but were present in the VPA-DD, such as Project Database and the following under 'Ongoing monitoring studies": Usage Survey, Project Survey, Leakage Assessment, Np,y Project Technology Days, and Hygiene Campaign. Per Monitoring report – Template Guide (V.1.1) "Provide a description of the monitoring system in accordance with the description of monitoring system and the monitoring plan in the Design Certified PDD." PD is to review and rectify in order to align with description of monitoring system set in VPA-DD
Project Participant Response: **Date:** 15/08/2024
Section C has been updated to better reflect the content in the VPA-DD. Some amendments have been made to maintain accuracy for the current monitoring period. Amendments (such as meeting the 100 minimum sample size requirements and the collection of user lists via WASH gatherings) have been approved in DEV 663 and DEV 664.
Documentation Provided as Evidence by Project Participant:
Reasoning for not Acceptance or Acceptance and Close Out: **Date:** 18/08/2024
The PD has submitted "GS10987_MR_MP2_v2". The PD has updated information in section C. Upon review of the amendments for section it can be confirmed that they were updated to reflect the VPA-DD and the current monitoring period. The amendments are appropriate and the information provided is sufficient. ***CAR#08 is Closed***
Acceptance and Close out by Team Leader: **Date:** 18/08/2024 Closed

Date:	04/07/2024		Raised by:	Team Leader		
Type:	CAR	Number:	9		Reference:	MR Section D.4

Team Leader Comment:	**Date:** 04/07/2024
In the MR, in section D.4, under Quality of the treated water, it states "All technologies included in the project have provided quarterly water quality test results in line with the national water quality test standard, apart from MAXI 1 for Q1 2021. As a result, the average failure rate from the project has been applied to the quarter in order to conservatively account for the missing test." This information is from the previous monitoring period and is not applicable to the current monitoring period. PD is to review and rectify.	
Project Participant Response:	**Date:** 15/08/2024
Information relating to Maxi 1 Q1 2021 has been removed.	
Documentation Provided as Evidence by Project Participant:	
[Note to PP: Please provide evidence to the Response above, clearly reference the documentation and indicate documentation name/version and date here- for soft copies, exact names of electronic files and if applicable, active links to the web page; reference to the section(s) and text within the documentation including page number(s) should be provided for easy reference and transparency]	
Reasoning for not Acceptance or Acceptance and Close Out:	**Date:** 18/08/2024
The PD has submitted "GS10987_MR_MP2_v2". In section D.4, for Quality of the treated water *the inconsistencies detected were not adjusted in the version of the MR submitted. PD is to review and rectify* ***CAR#09 is Open***	
Project Participant Response:	**Date:** 09/09/2024
This has been adjusted in the MR, PD has removed "MAXI 1 for Q1 2021" from section D.4.	
Documentation Provided as Evidence by Project Participant:	
GS10987_MR_MP2_v3.docx	
Reasoning for not Acceptance or Acceptance and Close Out:	**Date:**16/09/2024
The Project Developer has submitted 'GS10987_MR_MP2_v3'. In Section D.4, regarding the quality of treated water, the inconsistencies previously detected have been addressed and corrected in the updated version of the Monitoring Report submitted. *CAR#09 is Closed.*	
Acceptance and Close out by Team Leader: Closed	**Date:**16/09/2024

Table 2. FAR from this verification

N/A

Appendix 5. Sampling Approach

C89 Moses, Tabuley

	A	B	C	D	E	F	G	H
31	4	Kitengela	Sylvia, Mmboga	540727437485	TRUE	10		
32	3	Kitengela	Gideon, Mutuku	540704094017	TRUE	11		
33	7	Kitengela	Betty, Mukiri	540768029562	TRUE	12		
34	11	Kitengela	Ziporrah, Kerubo	540712174107	TRUE	13		
35	12	Kitengela	William, Wairanga	540711710257	TRUE	14		
36	14	Kitengela	Jacob, Mugire	254707880237	TRUE	15		
57	15	Likoni	Celestine, shimirimana	254768065552	TRUE	1		
58	9	Likoni	Winnie, Odhiambo	254470406029	TRUE	2		
59	11	Likoni	Amina, Juma	254741734744	TRUE	3		
60	6	Likoni	Kennedy, Onyango	254720249123	TRUE	4		
61	39	Likoni	Kiregu, Muthoni	254777448514	TRUE	5		
62	27	Likoni	Seth, Odhiambo	254728358349	TRUE	6		
63	29	Likoni	Dennis, Oiro	254703287862	TRUE	7		
64	12	Likoni	Amina, Hamisi	254112560620	TRUE	8		
65	19	Likoni	Jane, Micere	254798397110	TRUE	9		
66	24	Likoni	Kennedy, Wafula	254798339767	TRUE	10		
67	7	Likoni	Ayub, Mwarike	254700923480	TRUE	11		
68	40	Likoni	Zipporah, Lily	254726459686	TRUE	12		
69	23	Likoni	George, Chege	254714153255	TRUE	13		
70	32	Likoni	Millicent, Adhiambo	254720796546	TRUE	14		
71	14	Likoni	Richard, Kamala	254724231535	TRUE	15		
72	33	Likoni	Hussein, Osundwa	254721176572	TRUE	16		
73	30	Likoni	Latifah, Gulam	254703627075	TRUE	17		
74	2	Likoni	Peter, Njoroge	254724244701	TRUE	18		
75	36	Likoni	Alice, Sikuku	540110224920	TRUE	19		
76	10	Likoni	Mwanaisha, Ramadhani	254790940828	TRUE	20		
77	34	Likoni	Emily, Enzazi	254727982049	TRUE	21		
78	20	Likoni	Nancy, Gatwiri	254741643195	TRUE	22		
79	35	Likoni	Khadija, Mohammed	254727721551	TRUE	23		
80	18	Likoni	Zakaria, Okari	254745364614	TRUE	24		
81	1	Likoni	Karisa, Charo	254706444662	TRUE	25		
82	26	Likoni	Vincent, Mangi	254799984905	TRUE	26		
83	38	Likoni	Mwarua, Mzungu	540112020650	TRUE	27		
84	25	Likoni	Stephen, Odhiambo	254703284052	TRUE	28		
85	13	Likoni	Fatuma, Hamisi	254702217141	TRUE	29		
86	28	Likoni	Jackson, Kyeva	254716516750	TRUE	30		
87	8	Likoni	John, Mwalimu	254718925303	TRUE	31		
88	22	Likoni	Everlyn, Mbaya	254766574551	TRUE	32		
89	5	Likoni	Moses, Tabuley	254726502036	TRUE	33		

C31 Sylvia, Mmboga

	A	B	C	D	E	F	G	H
1	ID	Village	Name	Phone	Status	Randor	Selection	
2	1	Bamburi	Halima, Kijalu	254794353455	TRUE	1		
3	8	Bamburi	Maurice, Otieno	254748458327	TRUE	2		
4	18	Bamburi	Alex, Otieno	254723022505	TRUE	3		
5	17	Bamburi	Muleka, Abu	254113755367	TRUE	4		
6	9	Bamburi	Phylis, Wanja	254759881990	TRUE	5		
7	7	Bamburi	Carlos, Onyango	254742481793	TRUE	6		
8	14	Bamburi	Abdalla, Ahmed	254424713208	TRUE	7		
9	15	Bamburi	Aisha, Juma	254795450414	TRUE	8		
10	20	Bamburi	Amina, Rashid	254798114529	TRUE	9		
11	6	Bamburi	Jackleen, Ambia	254728580202	TRUE	10		
12	2	Bamburi	Rukia, Katana	540742682669	TRUE	11		
13	13	Bamburi	Leila, Abdikadir	254717175008	TRUE	12		
14	16	Bamburi	SAMUEL, GETENGA	254716199094	TRUE	13		
15	3	Bamburi	Hamina, Kijalu	540740339862	TRUE	14		
16	5	Bamburi	Victoria, Vilora	254705978097	TRUE	15		
17	11	Bamburi	Famih, Karissa	254748797104	TRUE	16		
18	4	Bamburi	Janet, Charo	254738295188	TRUE	17		
19	12	Bamburi	Jonathan, Tonkei	254720583710	TRUE	18		
20	10	Bamburi	Ben, Kungu	254718332462	TRUE	19		
21	19	Bamburi	Danson, Mwangi	254722947079	TRUE	20		
22	8	Kitengela	Ali, Ollabu	540798505590	TRUE	1		
23	2	Kitengela	Richard, Obuya	254705604540	TRUE	2		
24	15	Kitengela	Nancy, Bosire	540795625121	TRUE	3		
25	6	Kitengela	Dancan, Kigen	540707818914	TRUE	4		
26	9	Kitengela	David, Wakasiaka	540794179193	TRUE	5		
27	1	Kitengela	Hannah, Wangeci	540111708342	TRUE	6		
28	10	Kitengela	Judith, Akinyi	254759432526	TRUE	7		
29	5	Kitengela	Kelvin, Mulupi	540705131935	TRUE	8		
30	13	Kitengela	Getrude, Alosa	254793697298	TRUE	9		
31	4	Kitengela	Sylvia, Mmboga	540727437485	TRUE	10		
32	3	Kitengela	Gideon, Mutuku	540704094017	TRUE	11		
33	7	Kitengela	Betty, Mukiri	540768029562	TRUE	12		
34	11	Kitengela	Ziporrah, Kerubo	540712174107	TRUE	13		
35	12	Kitengela	William, Wairanga	540711710257	TRUE	14		
36	14	Kitengela	Jacob, Mugire	254707880237	TRUE	15		
57	15	Likoni	Celestine, shimirimana	254768065552	TRUE	1		
58	9	Likoni	Winnie, Odhiambo	254470406029	TRUE	2		
59	11	Likoni	Amina, Juma	254741734744	TRUE	3		

	A	B	C	D	E	F	G	H
89	5	Likoni	Moses, Tabuley	254726502036	TRUE	33		
90	16	Likoni	Jane, Micere	254798397110	TRUE	34		
91	4	Likoni	Nancy, Mungai	254706982332	TRUE	35		
92	31	Likoni	George, Mwaruma	254715684981	TRUE	36		
93	21	Likoni	Wycliff, Onsongo	25479966418	TRUE	37		
94	3	Likoni	Kinya, Gitonga	254724443649	TRUE	38		
95	37	Likoni	Maxwell, Mwalumbe	254712210000	TRUE	39		
96	17	Likoni	Polly, Kagendo	254746757469	TRUE	40		
112	12	Mtongwe	JOSHUA, Kazungu	254701369538	TRUE	1		
113	10	Mtongwe	Charles, Mwashigadi	254724577714	TRUE	2		
114	7	Mtongwe	Bidan, Abdalla	254113132319	TRUE	3		
115	5	Mtongwe	James, Sivi	254721808141	TRUE	4		
116	15	Mtongwe	Joshua, Mwita	254723471819	TRUE	5		
117	9	Mtongwe	Amina, Ali	254745634029	TRUE	6		
118	11	Mtongwe	Chalo, Cindy	254721761701	TRUE	7		
119	6	Mtongwe	Ann, Njeri	254117728090	TRUE	8		
120	3	Mtongwe	John, Jamhuri	254731500118	TRUE	9		
121	4	Mtongwe	Simon, Mwangi	254716506562	TRUE	10		
122	2	Mtongwe	Mzee, Hamisi	254706113188	TRUE	11		
123	1	Mtongwe	JOSHUA, Mokaya	254727058451	TRUE	12		
124	14	Mtongwe	Mwanahamisi, Yusuf	254723318938	TRUE	13		
125	8	Mtongwe	Mwana, Furaha	254702900212	TRUE	14		
126	13	Mtongwe	Weresiah, Zachariah	254717294618	TRUE	15		
127	13	Mwingi	Agnes, Kanini	254740429984	TRUE	1		
128	9	Mwingi	Mercy, Muthui	254768369604	TRUE	2		
129	2	Mwingi	Lydia, Kakali	254706061889	TRUE	3		
130	5	Mwingi	Kisinga, Paul	254748067844	TRUE	4		
131	1	Mwingi	Mary, Mutunga	254798519499	TRUE	5		
132	10	Mwingi	Josephine, Kivivya	254748417806	TRUE	6		
133	4	Mwingi	Jane, Mutua	254705770536	TRUE	7		
134	16	Mwingi	Maryline, Makasi	254797881882	TRUE	8		
135	7	Mwingi	Dorcus, Mutemi	254799068537	TRUE	9		
136	15	Mwingi	Esther, Kasyoka	254714392069	TRUE	10		
137	8	Mwingi	Muyathi, Muli	254707848311	TRUE	11		
138	14	Mwingi	Elestina, Wacharo	254726202477	TRUE	12		
139	6	Mwingi	Caroline, Katunge	254717064056	TRUE	13		
140	3	Mwingi	Nzisa, Makunzu	254724373877	TRUE	14		
141	12	Mwingi	Veronicah, Mumbe	254701498642	TRUE	15		
142	11	Mwingi	Mwendwa, Benjamin	254790708318	TRUE	16		

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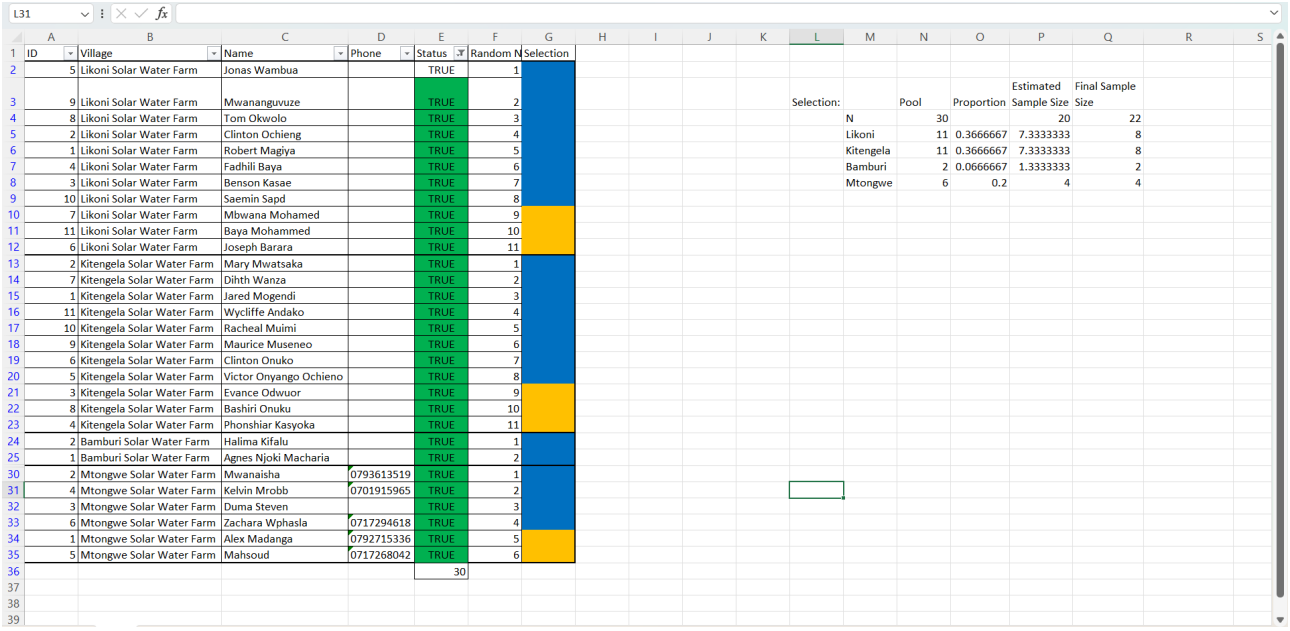
	A	B	C	D	E	F	G	H
142	11	Mwingi	Mwendwa, Benjamin	254790708318	TRUE	16		
143	9	Wote	Peter, Mutinda	254794708637	TRUE	1		
144	16	Wote	Thomas, Jakech	254707462046	TRUE	2		
145	5	Wote	Peter, Wambua	254708132559	TRUE	3		
146	13	Wote	Buya, Said	254716666143	TRUE	4		
147	2	Wote	Joshua, Kilei	254717651519	TRUE	5		
148	11	Wote	Cornelius, Mumo	254711222299	TRUE	6		
149	15	Wote	Joseph, Matundu	254114801530	TRUE	7		
150	14	Wote	Thomas, Muthoka	254798714065	TRUE	8		
151	8	Wote	Christine, Makau	254725982522	TRUE	9		
152	6	Wote	Nzioki, King'ola	254726431440	TRUE	10		
153	7	Wote	Boniface, Etyang	254792063078	TRUE	11		
154	10	Wote	Robinson, Mulwa	254725937986	TRUE	12		
155	12	Wote	Alex, Mulwa	254728667291	TRUE	13		
156	1	Wote	Daniel, Mulandi	254715972108	TRUE	14		
157	18	Wote	Ann, Makau	254722170698	TRUE	15		
158	4	Wote	Sister Christine, Wambua	254757391371	TRUE	16		
159	3	Wote	Steven, Kimani	254726215534	TRUE	17		
160	17	Wote	Charles, Maweu	25420816642	TRUE	18		
161								

162	Selection:		Population	Proportio	Estimated Sample Size	Final Sample Size
163		N	124		30	32
164		Bamburi	20	0.16129	4.83871	5
165		Kitengela	15	0.12097	3.62903	4
166		Likoni	40	0.32258	9.67742	10
167		Mtongwe	15	0.12097	3.62903	4
168		Miwing	16	0.12903	3.87097	4
169		Wote	18	0.14516	4.35484	5
170						
171	Buffer					
172						
173	0.21739	7.608695652	2.608695652	3		
174	0.17391	6.086956522	2.086956522	3		
175	0.43478	15.2173913	5.217391304	6		
176	0.17391	6.086956522	2.086956522	3		
177	0.17391	6.086956522	2.086956522	3		
178	0.21739	7.608695652	2.608695652	3		



ID	Village	Name	Phone	Status	Random N	Selection
5	Likoni Solar Water Farm	Jonas Wambua		TRUE	1	
9	Likoni Solar Water Farm	Mwananguvuze		TRUE	2	
8	Likoni Solar Water Farm	Tom Okwolo		TRUE	3	
2	Likoni Solar Water Farm	Clinton Ochieng		TRUE	4	
1	Likoni Solar Water Farm	Robert Magiya		TRUE	5	
4	Likoni Solar Water Farm	Fadhili Baya		TRUE	6	
3	Likoni Solar Water Farm	Benson Kasae		TRUE	7	
10	Likoni Solar Water Farm	Saemin Sapd		TRUE	8	
7	Likoni Solar Water Farm	Mbwana Mohamed		TRUE	9	
11	Likoni Solar Water Farm	Baya Mohammed		TRUE	10	
6	Likoni Solar Water Farm	Joseph Barara		TRUE	11	
2	Kitengela Solar Water Farm	Mary Mwatsaka		TRUE	1	
7	Kitengela Solar Water Farm	Dihth Wanza		TRUE	2	
1	Kitengela Solar Water Farm	Jared Mogendi		TRUE	3	
11	Kitengela Solar Water Farm	Wycliffe Andako		TRUE	4	
10	Kitengela Solar Water Farm	Racheal Muimi		TRUE	5	
9	Kitengela Solar Water Farm	Maurice Museneo		TRUE	6	
6	Kitengela Solar Water Farm	Clinton Onuko		TRUE	7	
5	Kitengela Solar Water Farm	Victor Onyango Ochieno		TRUE	8	
3	Kitengela Solar Water Farm	Evance Odwuor		TRUE	9	
8	Kitengela Solar Water Farm	Bashiri Onuku		TRUE	10	
4	Kitengela Solar Water Farm	Phonshiar Kasyoka		TRUE	11	
2	Bamburi Solar Water Farm	Halima Kifalu		TRUE	1	
1	Bamburi Solar Water Farm	Agnes Njoki Macharia		TRUE	2	
2	Mtongwe Solar Water Farm	Mwanaisha	0793613519	TRUE	1	
4	Mtongwe Solar Water Farm	Kelvin Mrobb	0701915965	TRUE	2	
3	Mtongwe Solar Water Farm	Duma Steven		TRUE	3	
6	Mtongwe Solar Water Farm	Zachara Wphasla	0717294618	TRUE	4	
1	Mtongwe Solar Water Farm	Alex Madanga	0792715336	TRUE	5	
5	Mtongwe Solar Water Farm	Mahsoud	0717268042	TRUE	6	
				30		

Selection:		Pool	Proportion	Estimated Sample Size	Final Sample Size
	N	30		20	22
	Likoni	11	0.3666667	7.3333333	8
	Kitengela	11	0.3666667	7.3333333	8
	Bamburi	2	0.0666667	1.3333333	2
	Mtongwe	6	0.2	4	4

Appendix 6. Assessment of data and parameters fixed ex-ante at the time of validation

Relevant SDG Indicator	SDG 13.B.1, Climate action
Parameter	CO2 emission factor of the fuel that is substituted or reduced. 112 tCO2/TJ for Wood/Wood Waste, or the IPCC default value of other relevant fuel (EFb,co2)
Data unit	tCO2/TJ
Default values used	112
Purpose of data	Calculation of the baseline emission
Source of verification of the source	2006 IPCC Guidelines for National Greenhouse Gas Inventories
Assessment	As per the correction detailed in MR v7 Section B.2.2 and implemented in MR v7 Section E, the actual emission calculation uses the quantity of charcoal, a 4:1 wood:charcoal ratio, and the corresponding wood CO2 emission factor. The VVB verified the correct implementation of this revised calculation method using the wood parameters sourced from IPCC defaults / TPDDTEC v3.1.

Relevant SDG Indicator	SDG 13.B.1, Climate action
Parameter	Non-CO2 emission factor of the fuel that is substituted or reduced (EFb,non-co2)
Data unit	tCO_2/TJ
Default values used	9.460
Purpose of data	Calculation of emission reduction
Source of verification of the source	IPCC Default emissions factor: Non-CO2 Emissions from Stationary

	Combustion. Annex 1, Table 2 and Table 3
Assessment	As per the correction detailed in MR v7 Section B.2.2 and implemented in MR v7 Section E, the actual emission calculation uses the quantity of charcoal, a 4:1 wood:charcoal ratio, and the corresponding wood non-CO2 emission factor. The VVB verified the correct implementation of this revised calculation method using the wood parameters sourced from IPCC defaults / TPDDTEC v3.1.

Relevant SDG Indicator	SDG 13.B.1, Climate action
Parameter	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, or the IPCC default value of other relevant fuel (EFp,co2)
Data unit	tCO2/TJ
Default values used	112
Purpose of data	Calculation of emission reduction
Source of verification of the source	IPCC Default emissions factor – https://www.ipcc-nggip.iges.or.jp/public/gp/bgp/2_2_Non-CO2_Stationary_Combustion.pdf GWP – https://www.ghgprotocol.org/sites/default/files/ghgp/Global-Warming-Potential-Values%20%28Feb%2016%202016%29_1.pdf
Assessment	As per the correction detailed in MR v7 Section B.2.2 and implemented in MR v7 Section E, the actual emission calculation uses the quantity of charcoal, a 4:1 wood:charcoal ratio, and the corresponding wood CO2 emission factor. The VVB verified the correct implementation of this revised calculation method using the wood parameters sourced from IPCC defaults / TPDDTEC v3.1.

Relevant SDG Indicator	SDG 13.B.1, Climate action
Parameter	Non-CO2 emission factor of the project fuel. This is equal to the baseline fuel EF in projects which use the same fuel (EFp,non co2)
Data unit	tCO2e/TJ
Default values used	9.460
Purpose of data	Calculation of emission reductions
Source of verification of the source	IPCC Default emissions factor – https://www.ipcc-nggip.iges.or.jp/public/gp/bgp/2_2_Non-CO2_Stationary_Combustion.pdf GWP – https://www.ghgprotocol.org/sites/default/files/ghgp/Global-Warming-Potential-Values%20%28Feb%2016%202016%29_1.pdf
Assessment	As per the correction detailed in MR v7 Section B.2.2 and implemented in MR v7 Section E, the actual emission calculation uses the quantity of charcoal, a 4:1 wood:charcoal ratio, and the corresponding wood non-CO2 emission factor. The VVB verified the correct implementation of this revised calculation method using the wood parameters sourced from IPCC defaults / TPDDTEC v3.1.

Relevant SDG Indicator	SDG 13.B.1, Climate Action
Parameter	Net calorific value of the fuel that is substituted or reduced (NCVb)
Data unit	TJ/ton
Default values used	0.0156

Purpose of data	Calculation of emission reduction
Source of verification of the source	TPDDTEC v.3.1
Assessment	As per the correction detailed in MR v7 Section B.2.2 and implemented in MR v7 Section E, the actual emission calculation uses the quantity of charcoal, a 4:1 wood:charcoal ratio, and the corresponding wood net calorific value. The VVB verified the correct implementation of this revised calculation method using the wood parameters sourced from IPCC defaults / TPDDTEC v3.1.

Relevant SDG Indicator	SDG 13.B.1, Climate Action
Parameter	Net calorific value of the fuel that is substituted or reduced (NCVp)
Data unit	TJ/ton
Default values used	0.0156
Purpose of data	Calculation of emission reduction
Source of verification of the source	TPDDTEC v.3.1
Assessment	As per the correction detailed in MR v7 Section B.2.2 and implemented in MR v7 Section E, the actual emission calculation uses the quantity of charcoal, a 4:1 wood:charcoal ratio, and the corresponding wood net calorific value. The VVB verified the correct implementation of this revised calculation method using the wood parameters sourced from IPCC defaults / TPDDTEC v3.1.

Relevant SDG Indicator	SDG 13.B.1 (Climate Action), SDG 3.9.1 (Good Health and Well-Being)
Parameter	Quantity of fuel in tons required to treat 1 litre of water using technologies representative of baseline scenario b during the project year y (Wb,y)
Data unit	kg/litre
Default values used	0.4
Purpose of data	Calculation of emission reductions and impact on SDG 3.
Source of verification of the source	GS Rule Update: Application of TPDDTEC Methodology to Safe Water Supply Projects

Relevant SDG Indicator	SDG 13.B.1 (Climate Action), SDG 6.1.1 (Clean Water and Sanitation)
Parameter	Quantity of wood fuel or fossil fuel in tons required to treat 1 litre of water using technologies representative of the project scenario p during project year (Wp,y)
Data unit	kg/litre
Default values used	0.4
Purpose of data	Calculation of emission reduction
Source of verification of the source	GS Rule Update: Application of TPDDTEC Methodology to Safe Water Supply Projects

Relevant SDG Indicator	SDG 13.B.1 (Climate Action), SDG 3.9.1 (Good Health and Well-Being)
Parameter	Quantity of fuel in tons required to treat 1 litre of water using technologies representative of baseline scenario b during the project year y (Wb,y Charcoal)

Data unit	kg/litre
Default values used	0.0001
Purpose of data	Calculation of emission reductions and impact on SDG 3.
Source of verification of the source	GS Rule Update: Application of TPDDTEC Methodology to Safe Water Supply Projects

Relevant SDG Indicator	SDG 13.B.1 (Climate Action), SDG 6.1.1 (Clean Water and Sanitation)
Parameter	Quantity of wood fuel or fossil fuel in tons required to treat 1 litre of water using technologies representative of the project scenario p during project year (Wp,y Charcoal)
Data unit	kg/litre
Default values used	0.0001
Purpose of data	Calculation of emission reduction
Source of verification of the source	GS Rule Update: Application of TPDDTEC Methodology to Safe Water Supply Projects

Relevant SDG Indicator	SDG 13.B.1 (Climate Action), SDG 6.1.1 (Clean Water and Sanitation)
Parameter	Expressed as a percentage, this is the portion of users of the project technology j or who in the baseline were already consuming safe water without boiling it (Cj)
Data unit	%
Default values used	7%
Purpose of data	Calculation of emission reductions and SDGs 3&6 impact.
Source of verification of the source	Baseline study

Relevant SDG Indicator	SDG 13.B.1, Climate action
Parameter	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. These premises must be in the project boundary. This parameter can be determinedex-ante using a survey. This parameter is to be applied for premises that are under suppressed demand situation.(Xboil Non-Suppressed Demand)
Data unit	%
Default values used	17.4%
Purpose of data	Calculation of emission reductions.
Source of verification of the source	Baseline Project Survey. Credible literature, studies, survey,reports, relevant to the project target area.

Relevant SDG Indicator	SDG 13.B.1, Climate action
Parameter	Percentage of persons boiling water in the baseline ($P_{b, boil}$)
Data unit	Percentage
Default values used	24.6%
Purpose of data	Determination of number of persons boiling water in the baseline
Source of verification of the source	Baseline survey

Relevant SDG Indicator	SDG 5.4.1 (Gender Equality)
Parameter	Time spent collecting water per household per day prior to project

	(Tb,y)
Data unit	Hours
Default values used	2.4
Purpose of data	Calculating time saved collecting water by project.
Source of verification of the source	Baseline survey

Parameter	**Assessment by the VVB**
Relevant SDG Indicator	SDG 13.B.1 (Climate Action)
Data / Parameter: **(as in monitoring plan of PDD):**	Biomass used during year y that can be established as non-renewable biomass (fNRB,i,y)
Unit	Fractional non-renewability
Measuring frequency/Time Interval:	Ongoing
Reported value	0.92
Means of Verification	Document review for the "Kenya_fNRB Report_20 July 2021"
Verified Source of Data	Final Value(CDM default): https://cdm.unfccc.int/DNA/fNRB/index.html Calculations: CDM Tool 30 EB 108 Annex 11 v3.0 2020 C4 EcoSolutions authored report supplied with project documentation "Kenya_fNRB Report_20 July 2021"
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Appendix 7. Assessment of data and parameters monitored

Monitoring Parameter Requirement	**Assessment by the VVB**
Relevant SDG Indicator	SDG 3.9.1 (Good Health and Wellbeing) SDG 6.1.1 (Clean Water and Sanitation)
Data / Parameter: **(as in monitoring plan of PDD):**	Number of persons having access to safe water in the project activity (Py)
Unit	Number
Measuring frequency/Time Interval:	Continuous
Reported value	2022- 40,578

	2023- 52,796 2024- 63,339
Means of Verification	The verification team reviewed the Water Point Project Database and the default value of Qp,y to ensure the accurate calculation of the number of people with access to safe water under the project activity. During the desk review stage, the calculation and implementation of the Py value were assessed. The site visit also included a review of the process for quantifying produced water meter and sales records. This review encompassed an evaluation of the point-of-sales process and meetings with the site and field teams to ensure that the quantification of sold or produced water adheres to accurate data recording and transfer procedures.
Verified Source of Data	Water Point Project Database
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	During meetings with the field team, the process of point-of-sales was reviewed, focusing on the quantification methodology, which is based on water production and sales records. The Project Developer conducted a cross-check between these two sources to ensure consistency and accuracy, adopting the more conservative value where discrepancies were observed. It was confirmed that such differences did not arise from improper implementation of QC/QA procedures but were instead attributed to issues such as internet connectivity and outages.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	**Assessment by the VVB**
Relevant SDG Indicator	SDG 5.4.1 (Gender Equality)
Data / Parameter: **(as in monitoring plan of PDD):**	Project time spent collecting water and firewood per household per day(Tp,y)
Unit	Hours
Measuring frequency/Time Interval:	Annual
Reported value	2022- 0.25 2023- 0.17 2024- 0.17
Means of Verification	Document review for the submitted project and usage surveys, in addition to the interviews conducted with end users during the site visit to check the accuracy of the conducted surveys.
Verified Source of Data	Project Survey
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes

Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Data collection and transfer processes have been confirmed to follow established procedures, including trained staff administering surveys and ensuring accurate data transfer to a central server for analysis.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	**Assessment by the VVB**
Relevant SDG Indicator	SDG 13.B.1 (Climate Action), SDG 6.1.1 (Clean Water and Sanitation), SDG 3.9.1 (Good Health and Well-Being)
Data / Parameter: **(as in monitoring plan of PDD):**	Quantity of safe water boiled in the project scenario p during the year y using the zero or low emissions clean water supply technology (Qp,cleanboil,y)
Unit	Liters per person per day
Measuring frequency/Time Interval:	Annual
Reported value	2022- 0 2023 - 0.1258 2024 - 0.1258
Means of Verification	Document review for the submitted project survey results, and the site visit interviews that verified the results of the project surveys, as well as re-calculation of the parameter to ensure accuracy of the quantification methods used by the PP
Verified Source of Data	Project Survey
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Assessment of details of monitoring equipment, its specification and calibrationas per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Data collection and transfer processes are confirmed to adhere to established procedures, with trained staff conducting surveys and ensuring accurate transfer to a central server for analysis.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	**Assessment by the VVB**
Relevant SDG Indicator	SDG 13.B.1 (Climate Action)
Data / Parameter: **(as in monitoring plan of PDD):**	The raw unsafe water that is still boiled after installation of the water treatment technology (Qp,rawboil, y)
Unit	Litres per person per day

Measuring frequency/Time Interval:	NA
Reported value	0
Means of Verification	Document review of the value in the registered PDD and the methodology TPDDTEC v3.1 to cross check the value and appropriateness of the default value used
Verified Source of Data	TPDDTEC v3.1 Methodology "Default value"
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Assessment of details of monitoring equipment, its specification and calibrationas per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	NA
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	**Assessment by the VVB**
Relevant SDG Indicator	SDG 6.1.1 (Clean Water and Sanitation)
Data / Parameter: **(as in monitoring plan of PDD):**	Quality of Treated Water
Unit	Parameters as per national standards
Measuring frequency/Time Interval:	Quarterly
Reported value	2022- 99 Water quality failure days (5.79%) 94.21% pass 2023- 538 Water quality failure days (18.42%) 81.58% pass 2024- 101 Water quality failure days (13.87%) 86.13% pass certificates provided at the verification. Total – 738 Water quality failure days (13.77%) and 86.23% pass
Means of Verification	The verification team reviewed the submitted Water Quality Tests (WQTs) and verified the credentials of the third-party entity responsible for water testing. During the on-site inspection, discussions were held with the field team and site operators to assess the implementation of internal quality checks. It was confirmed that the internal management of water quality testing is conducted effectively and implements consistency.
Verified Source of Data	Water Quality Test Reports
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes

Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Data collection and transfer for water quality tests have been confirmed to adhere to established procedures. Water samples are directly collected from the site by the accredited laboratory, and four tests are conducted annually to ensure compliance. Additionally, any period of time between a failed test and the subsequent pass is excluded from emission reduction claims.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	**Assessment by the VVB**
Relevant SDG Indicator	SDG 6.1.1 (Clean Water and Sanitation), SDG 3.9.1 (Good Health and Well-Being)
Data / Parameter: **(as in monitoring plan of PDD):**	Hygiene campaigns/Education Programme
Unit	Outcome of WASH meetings
Measuring frequency/Time Interval:	Annual
Reported value	Participants attending WASH training
Means of Verification	Document review for the training records available at the local implementer's offices, and the submitted evidences by the PP. Additionally, site visit interviews were made with the end users to check the WASH campaigns conducted during this monitoring period.
Verified Source of Data	Annual hygiene campaign results
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	The results of the annual hygiene campaign have been reviewed by the verification team. Additionally, surveys conducted during the on-site visit included questions to beneficiaries regarding the hygiene campaign and its impact on their hygienic practices and overall quality of life..
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	**Assessment by the VVB**
Relevant SDG Indicator	SDG 13.B.1 (Climate Action)
Data / Parameter: **(as in monitoring plan of PDD):**	Leakage for project scenario p in year y (LEp,y)
Unit	tCO2e per year
Measuring frequency/Time Interval:	Completed every two years

Reported value	5%
Means of Verification	Document review and assessment for section E.3 of the MR. Where the PP presents the results of their assessment and calculation for project leakage. Furthermore, the physical site visit confirmed that all potential leakage sources were thoroughly assessed. The field team from Ampere verified that no potential leakage sources were identified during this monitoring period. However, regarding the potential source of leakage from boiling project water, the Project Developer's 5% is applied for conservativeness
Verified Source of Data	Annual Monitoring Survey 2022 Annual Monitoring Survey 2024
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	NA
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	**Assessment by the VVB**
Relevant SDG Indicator	SDG 13.B.1 (Climate Action), SDG 6.1.1 (Clean Water andSanitation)
Data / Parameter: **(as in monitoring plan of PDD):**	Number of persons consuming water supplied by project scenario p through year y(Np,y) [Wood]
Unit	Project Technology Days
Measuring frequency/Time Interval:	Continuous
Reported value	2022- 2,738,533 2023- 4,236,671 2024 - 1,248,834 Total for MP2 - 8,225,038
Means of Verification	Document review of the ER calculation sheet and repair confirmation forms, where the non-operating or water quality did not meet water quality standards. days were checked. In addition to reviewing the number of HH benefiting from each borehole using the borehole data base. The data management system ensures the accurate transfer of data and the proper reporting of emission reductions, with all necessary QA/QC processes in place. This has been confirmed through onsite visit interviews, which corroborated the evidence provided by the PD.

	Additionally, sales records are managed through the implementation of a point-of-sale platform. Water production data is measured using installed meters, which have been assessed and determined not to require calibration. It was observed that the data management system encountered gaps in water production data recording, caused by issues related to non-recording and internet connectivity. These gaps have resulted in variances between production and sales data. verification team confirms that the variances between sales and production have been adjusted treatment capacity calculations, with the most conservative values applied to ensure accuracy and compliance.
Verified Source of Data	Project Database
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Assessment of details of monitoring equipment, its specification and calibrationas per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place. This is evident by the result of the onsite visit interviews which corroborated the evidence provided by the PP.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	**Assessment by the VVB**
Relevant SDG Indicator	SDG 13.B.1 (Climate Action), SDG 6.1.1 (Clean Water and Sanitation)
Data / Parameter: **(as in monitoring plan of PDD):**	Number of persons consuming water supplied by project scenario p through year y (Np,y Charcoal)
Unit	Project Technology Days [Charcoal]
Measuring frequency/Time Interval:	Continuous
Reported value	2022 - 8,218,598 2023 - 12,710,012 2024 – 3,746,503 Total for MP2 – 24,675,113

Means of Verification	Document review of the ER calculation sheet and repair confirmation forms, where the non-operating or water quality did not meet water quality standards. days were checked. In addition to reviewing the number of HH benefiting from each borehole using the borehole database. The data management system ensures the accurate transfer of data and the proper reporting of emission reductions, with all necessary QA/QC processes in place. This has been confirmed through onsite visit interviews, which corroborated the evidence provided by the PD. Additionally, sales records are managed through the implementation of a point-of-sale platform. Water production data is measured using installed meters, which have been assessed and determined not to require calibration. It was observed that the data management system encountered gaps in water production data recording, caused by issues related to non-recording and internet connectivity. These gaps have resulted in variances between production and sales data. verification team confirms that the variances between sales and production have been adjusted treatment capacity calculations, with the most conservative values applied to ensure accuracy and compliance.
Verified Source of Data	Project Database
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Assessment of details of monitoring equipment, its specification and calibrationas per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place. This is evident by the result of the onsite visit interviews which corroborated the evidence provided by the PD.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	**Assessment by the VVB**
Relevant SDG Indicator	SDG 13.B.1 (Climate Action), SDG 6.1.1 (Clean Water and Sanitation), SDG 3.9.1 (Good Health and Wellbeing)
Data / Parameter: **(as in monitoring plan of PDD):**	Usage rate in project scenario p through year y (Up,y)
Unit	%
Measuring frequency/Time Interval:	Annual

Reported value	2022- 70.90% 2023- 80.22% 2024- 80.22%
Means of Verification	Document review of the usage survey, and the review conducted for the survey records at the local partners offices. In addition to the interviews made with the end users during the site visit, which checked for accuracy of the reported usage rate. The verification team confirms that the values obtained from the usage survey and the site visit survey were consistent, with both resulting in similar usage rate values. The verification process confirms that the deviation request has been reviewed. For this monitoring period, the usage rate has been found to be less than 90% for this monitoring period.
Verified Source of Data	Annual Monitoring Survey 2022 Annual Monitoring Survey 2024
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Data collection and transfer processes are confirmed to adhere to established procedures, with trained staff conducting surveys and ensuring accurate transfer to a central server for analysis.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	**Assessment by the VVB**
Relevant SDG Indicator	SDG 13.B.1 (Climate Action), SDG 3.9.1 (Good Health and Well-Being)
Data / Parameter: **(as in monitoring plan of PDD):**	Quantity of safe water supplied in the project scenario p during the year y using the zero or low emissions clean water supply technology (Qp,y)
Unit	Litres per person per day
Measuring frequency/Time Interval:	Default Value
Reported value	4
Means of Verification	The Verification team reviewed the methodology upon the desk review stage and made sure the applied default value was in line with the methodology requirements.
Verified Source of Data	TPDDTEC v3.1 Methodology "Default value"
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA

Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	NA
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA