TEMPLATE

DEVIATION REQUEST FORM

PUBLICATION DATE **11.04.2021**

Version **5.0**

A. To be completed by Gold Standard

1| Decision

1.1 | Date – dd/mm/yyyy

27/04/2024

1.2 | Decision

The Deviation Request is Approved.

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 annual monitoring activities carried out in March 2024 for the year 2023 has also bee exempted.

PD shall note that this exemption shall not be a precedent for future monitoring periods and surveys, with respect to the minimum total sample size of 100 with atleast 30 samples for project technologies from each group. The same shall be followed for the monitoring to be conducted for 2024. Similarly the monitoring survey shall be conducted annually in line with TPDDTEC methodology for 2024 and for future monitoring surveys.

Note – The project developer shall note that the decision is based on the information provided in the deviation request form and only against the applicable standard requirement quoted in the form below by the developer. The project developer shall comply with all other applicable standard requirements until unless specifically mentioned in the deviation decision.

1.3 | Is this decision applicable to other project activities under similar circumstances?

B. To be completed by the Project Developer/Coordinating and Managing Entity and/or VVB requesting deviation (Submit deviation request form in Microsoft Word format)

2| Background information

Deviation Reference Number	DEV_664	
Date of decision	27/04/2024	
Precedent (YES/NO)	No	
Precedent details	NA	
Date of submission	09/04/2024	
Project/PoA/VPA	Project	
	☐ PoA	
	☒ VPA	ID – GS10987
Project/PoA/VPA title	Givepower Kenya Solar Water Farms	
Date of listing	26/07/2021	
GS Standard version applicable	Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version Section Version 3.1	
Date of transition to GS4GG (if applicable)		
Date of transition to Gold Standard from another standard (e.g. CDM) (if applicable)		
Date of design certification/inclusion (if applicable)	09/08/2021	
Location of project/PoA/VPA	Republic of Kenya	
Scale of the project/PoA/VPA	☐ Microscale ☒ Small scale ☐ Large scale	
Gold Standard Impact Registry link of the project/PoA/VPA	https://registry.goldstandard.org/projects/details/2946	
Status of the project/PoA/VPA	☐ New ☐ Listed ☐ Certified design ☒ Certified project	
Title/subject of deviation		
Specify applicable rule/requirements/methodology, with exact paragraph reference and version number	Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version Section Version 3.1, Monitoring Methodology 3.1.C, Paragraph B	
Specify the monitoring period for which the request is valid (if applicable)	Start date 01/01/2022	End date 31/03/2024

Submitted by	Contact person name: Stephen Morris Email ID: Stephen.morris@co2balance.com
	Organisation: CO2Balance UK Ltd
	Project participant: Yes ☒ No ☐
Validation and Verification body (VVB opinion shall be included, where required by the applicable rules/requirements or request is submitted by the VVB).	Yes ☐ No ☒ If yes; VVB name: VVB Staff name(s):
Any previous deviations approved for the same project activity/PoA/VPA(s)?	Yes ☒ No ☐

3| Deviation detail

3.1 | Description of the deviation:

**Guidance* Use the space below to describe the deviation and substantiate the reason for requesting deviation from applicable rules/requirements. Please include all relevant information in support of the request. You are requested to follow the principles for requesting deviations, given in the Deviation Approval Procedure/ Design Change Requirements.*

3.1.1 | Deviation detail (to be completed by Project developer):

This request form is for two annual monitoring deviations over the monitoring period (01/01/2022 – 31/03/2024).

The ***first deviation*** is for the first set of annual monitoring (covering period 01/01/2022 – 31/12/2022), whereby only 83 survey samples were collected for analysis.

This deviates from the methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version Section Version 3.1, 3.1.C, Paragraph B which states "The minimum total sample size is 100, with at least 30 samples for project technologies of each age group."

In 2022, the total sample size was 83, not reaching the minimum sample size of 100, in which 30 samples for 2 of the 3 groups were not represented. The number of samples in the monitoring only falls slightly below the methodological threshold.

The ***second deviation*** is for both annual monitoring activities covering period 1 (01/01/2022 – 31/12/2022) and period 2 (01/01/2023 - 31/12/2023).

In period 1, the majority of annual monitoring surveys were conducted inside the 12-month period. The final date of final completion for these surveys was the (09/01/2023).

In period 2, the annual monitoring was not conducted in the 12-month period. It was conducted in March 2024, three months after the end of the annual period. It is suggested that the annual monitoring conducted in March 2024 be applied to period 01/01/2023 – 31/03/2024), due to the reasons outlined in the sections below.

Referring Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version Section Version 3.1, 3.1.C, Paragraph B, it states that the survey should be "Completed annually." In line with this, the expectation is for the survey to be completed on a yearly basis. This annual requirement was not met in 2023 and was partially met in 2022.

In light of these deviations, PD suggests applying the values obtained in the 2022 and 2024 annual monitoring surveys to the monitoring period due to the reasons outlined in the following sections; applying the 2022 results for 12 months, and the 2024 results to the following 15 months to 31/03/2024.

3.1.2 | VVB opinion (to be completed by VVB, if applicable):

**Guidance* If required by SustainCERT or Gold Standard for this particular deviation, please add here the VVB's opinion.*

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3.2 | Assessment of the deviation:

**Guidance* Use the space below to describe how the deviation complies with the requirements, and, where applicable, the accuracy, completeness and conservativeness is ensured. Please include all relevant information in support of the request.*

3.2.1 | Deviation assessment (to be completed by Project developer):

While the number of annual monitoring surveys conducted in 2022 fell short of the minimum requirement, a substantial increase to 159 surveys in 2024 surpassed sampling guidelines ensuring comprehensive representation across all age groups.

Conservativeness

The annual monitoring collected several parameters related to the SDGs. For SDG 6 and 13, information on the usage of GivePower water was collected. The usage rate calculated in 2022 was 69%, and in 2024 was 79% giving a weighted average over the monitoring period of 74%; these results demonstrate conservativeness of the applied values. Both values fall below the usage rate cap of 95% which can be applied to the project, demonstrating conservativeness to the calculation of the emission reductions and SDG 6. To add to the conservativeness of the applied values in this monitoring period, it can be assumed with a high degree of confidence that water bought by end users will be used as there is a cost associated, as shown by a previously accepted deviation request (SC – 54) which allowed a default usage rate of 90% to be applied. The values applied over this monitoring period are below this threshold, demonstrating how the deviation of not reaching the threshold of surveys in 2022 remains conservative.

Usage rates are gathered to determine a reduction in usage as the project progresses, to capture drop-off. The results of the surveys in 2022 and 2024 demonstrate there has not been a drop-off in usage. The conservative values applied illustrate how the surveys being conducted late have not resulted in overstating the usage rate for either period.

The annual monitoring also collected data on time spent collecting water in the project. Time saved (TR_y) = time spent collecting in the baseline ($T_{b,y}$) – time spent

collecting in the project scenario ($T_{p,y}$); therefore, the higher the value observed in the project scenario ($T_{p,y}$), the lower value of time saved from the project activity.

The parameter $T_{p,y}$ was calculated to be 1.74 in 2022 and 1.17 in 2024, giving a weighted average over the monitoring period of 1.43. The decrease in time spent collecting water in the project from 2022 to 2024 demonstrates that the 2022 values remain conservative. The 2022 data, which did not meet the required threshold of surveys, applied a value which was higher than what was observed in 2024; this shows the 2022 data did not overstate the time saved in the project during that period, and remains conservative. The annual monitoring being conducted slightly outside of the 12-month period did not impact the value of $T_{p,y}$; the conservative values mitigate any overstating of time saved collecting water in the project scenario.

Accuracy, Precision, and Completeness

The applied results also remain accurate. Throughout the monitoring period (01/01/2022 – 31/03/2024), the number of surveys being used in the calculations is 242, which exceeds the minimum requirement of 200 (100 in each annual period).

When using "Sampling and surveys for CDM project activities and programmes of activities version 03.1", the 2022 sample had a relative precision of 12.1%, not meeting the 10% relative precision threshold due to fewer than 100 surveys.

Calculator to check if the precision has been met or not after a sampling survey is conducted

Input	Value	Notes
Actual sample size	83	
Sample proportion	0.6904	Usage Rate
Standard error of the proportion	0.0507	
Precision associated with a proportion	0.0834	
Relative precision	12.1%	

Paragraph 18 of "Standard Sampling and surveys for CDM project activities and programmes of activities Version 09.0" states: "If the estimates from the actual samples fail to achieve the target minimum levels of precision, the project participants or the coordinating/managing entity shall either: (a) Perform additional data collection that is a supplemental or new sample to reach the required precision level".

The 2024 annual monitoring collected 159 surveys. Using the applied usage rate, the relative precision of the survey was the following:

Calculator to check if the precision has been met or not after a sampling survey is conducted		
Input	**Value**	**Notes**
Actual sample size	159	
Sample proportion	0.7927	Usage Rate
Standard error of the proportion	0.0321	
Precision associated with a proportion	0.0528	
Relative precision	6.7%	

Taking the average of the two values of the relative precision; the annual monitoring surveys meet the 90/10 confidence/precision requirements. The supplementary data collection in 2024 demonstrates that the applied values of the annual monitoring, particularly the usage survey, remain accurate and precise. This complies with the CDM guidance.

Regarding parameter $T_{p,y}$, this parameter was calculated to be 1.74 in 2022 and 1.17 in 2024, indicating a consistent decrease in the time spent collecting water over the monitoring period. The consistent results demonstrate that they remain accurate and can therefore be applied to the monitoring period.

Furthermore, TPDDTEC v3.1 3.1.C Paragraph B states "The usage survey provides a single usage parameter that is weighted based on drop off rates that are representative of the age distribution for project technologies in the total sales record". The applied usage rate in March 2024 exceeded the value in 2022, indicating that the technology's usage is not declining over time. This section of the methodology is primarily aimed at improved cookstoves, which have an expected lifetime of approximately 5 years. Over the 5 years, the stove's quality may decline, and the household may have the opportunity to acquire new stoves, which contribute to a drop-off in usage of the technology. Regarding the technology in this project, a drop-off in usage is not expected due to the quality and lifetime of the technology. The solar desalination sites have an expected lifetime of 20 years (section A.3 of the VPA-DD), therefore the potential drop-off in use due to deterioration of the technology is spread out over a much longer period than a cookstove. In addition, the GivePower technology far exceeds the quality level of other alternative water sources (e.g., handpumps, street water sellers, etc.), this reduces the possibility of users changing

water sources due to improved alternative technology. These factors mean the usage rate is less applicable to a project of this type.

3.2.2 | VVB opinion (to be completed by VVB, if applicable):

Guidance *If required by SustainCERT or Gold Standard for this particular deviation, please add here the VVB's opinion.*

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3.3 | Impact of the deviation:

Guidance *Use the space below to describe the impact of the deviation on project design, safeguarding principles assessment, SDG assessment, emissions reductions, monitoring frequency, data quality, potential risk or any other relevant aspect of the project. Please substantiate the impact assessment with relevant and verifiable data/information.*

3.3.1 | Impact assessment (to be completed by Project developer):

Project Design

Lower numbers and late collection of annual monitoring surveys had no impact on the project design. Activities were carried out as normal, and safe water was provided to end-users.

Safeguarding principles assessment

The delay and number of annual monitoring surveys had no impact on the safeguarding principles, with no changes to the approved responses in the validated VPA-DD.

SDG assessment

SDG 3 remains unaffected as parameters are not recorded in annual monitoring, and delays to this had no effect. SDG 5, regarding time saved to collect water, $T_{p,y}$ showed consistent saving of time in water collection for households in line with ex-ante estimations. SDG 6 and SDG 13 take into account the usage rate, which remains consistent and conservative across the monitoring period.

Emissions reductions

During two rounds of annual monitoring, the results obtained for U_{py} which is applied to the emission reduction calculations remain conservative.
The value of 69% in 2022 and 79% in 2024 demonstrate how the calculation of emission reductions is conservative when applied to the emission reduction calculations.

Monitoring frequency
The monitoring frequency was delayed by a few months of which annual monitoring was to be conducted in 2023 and occurred in early 2024.

The deviation of conducting the 2023 monitoring in early 2024 impacted the monitoring frequency for this period. However, the surveys were conducted only slightly outside the required threshold, and still provided conservative and accurate results. Therefore, the impact was minimal.

Data quality
The integrity of the data quality was unaffected due to the conservative approaches outlined in section 3.2.1. Results from the monitoring are consistent, which demonstrates that the data quality remained of a high standard despite the deviations from the methodology. Therefore, the impact on data quality is minimal.

Potential risks to other aspects of the project
Delays and subtractive annual monitoring surveys did not introduce any additional risks. Safe drinking water remained available to end-users and other activities continued as normal. The deviations did not pose any risks to the project.

As the deviations had minimal impact to the above aspects of the project, PD suggests applying the values obtained in the 2022 and 2024 annual monitoring surveys to the monitoring period; applying the 2022 results for 12 months, and the 2024 results to the following 15 months to 31/03/2024.

3.3.2 | VVB opinion (to be completed by VVB, if applicable):

Guidance *If required by SustainCERT or Gold Standard for this particular deviation, please add here the VVB's opinion.*

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3.4 | Documents:

Guidance *List of documents provided (note that once a decision has been made by Gold Standard, this deviation form along with supporting documents will be made public on the Gold Standard website. If any of the supporting documents are confidential, please indicate here to ensure they are omitted.)*

Version number	Release date	Description
5	11.04.2022	Additional information added: - date of listing, design certification, transition - standard version - specific reference to a requirement deviated from - any previous deviations/design changes approved Guidance on VVB opinion
4	14.01.2021	
3	16.07.2020	
2	03.05.2018	
1	01.07.2017	Initial adoption