TEMPLATE

DEVIATION REQUEST FORM

PUBLICATION DATE **14.1.2021**

Version **4.0**

A. To be completed by Gold Standard

1| Decision

1.1 | Date – 28/10/2021

1.2 | Decision

The proposed deviation request is **not approved**. The deviation is requested against the methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption (TPDDTEC) (v3.1) which does not apply to electric cooking devices.

Suggestions:

GS had recently released a new methodology customized for the metered electric cooking devices, i.e. Methodology for Metered & Measured Energy Cooking Devices. The Project Developer is suggested to follow the requirements and provisions of the same. However, if the Project Developer needs a deviation from the approach provided in Methodology for Metered & Measured Energy Cooking Devices, then they may re-submit the deviation request explaining the deviation from the above-mentioned methodology instead of the TPDDTEC (v3.1). In drafting this re-submission of deviation, PD is also expected to explain:

1. The methodological data/parameter to be revised.
2. The rationale behind drafting a new approach/method instead of following the established method(s) set out in the approved Methodology for Metered & Measured Energy Cooking Devices.
3. The difference between the approach already established in the methodology and the new method proposed by PD.
4. Explanation of how the proposed method in line with the GS Principles and relevant methodological requirements.
5. Explanation of how the proposed method is the conservative and suitable within the context of the methodology.

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

No

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_191	
Date of decision	28/10/2021	
Precedent (YES/NO)	No	
Precedent details	N/A	
Date of submission	10/10/2021	
Project/PoA/VPA	☒ Project	ID – GSXXXX
	☐ PoA	ID – GSXXXX
	☐ VPA	ID – GSXXXX
Project/PoA/VPA title	Electric Cooking for Households in Malawi	
Location of project/PoA/VPA	Host country(ies)	
Scale of the project/PoA/VPA	☒ Microscale ☐ Small scale ☐ Large scale	
Gold Standard Impact Registry link of the project/PoA/VPA	N/A	
Status of the project/PoA/VPA	☒ New ☐ Listed ☐ Certified design ☐ Certified project	
Title/subject of deviation	Calculation of Bb,y	
Specify applicable rule/requirements/methodology and version number	Technologies and Practices to Displace Decentralized Thermal Energy Consumption, Version 3.1	
Specify the monitoring period for which the request is valid (if applicable)	Start date End date	
Submitted by	Contact person name: Annika Richter Email ID: richter@atmosfair.de	
	Organisation: atmosfair gGmbH	
	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: Auditor name:	

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):

We would like to deviate from the methodology "Technologies and Practices to Displace Decentralized Thermal Energy Consumption, Version 3.1" in order to make it applicable to electric cooking devices. In order to do this, a novel method for obtaining the parameter $B_{b,y}$ shall be used. It includes monitoring electricity consumption of the electric cooking devices using electricity meters and performing a study to obtain the substitution factor of electricity and biomass fuel.
In order to determine this factor, an electricity consumption study will determine the average amount of electricity needed to fulfill cooking energy needs exclusively with electricity, similarly to a Kitchen Performance Test for biomass consumption, but using electricity meters. From this consumption and the baseline biomass consumption it can be derived how many tonnes of biomass are displaced by a kWh of electricity.
By monitoring electricity consumption, the amount of displaced biomass can then be established, more transparently and reliably than through user interviews.
Cooking with electricity functions entirely differently from cooking with biomass, as it allows for better heat control, heat retention as well as energy efficiency. Since energy efficiency is only one factor determining the overall energy consumption of an electric cooking device[1], considering energy efficiency alone to estimate the displacement of biomass fuel does not suffice. The empiric determination of a substitution factor for electricity and biomass fuel therefore is the most accurate way of measuring the displacement of biomass fuels by electric cooking devices.

[1] This is described in detail in the Worldbank Report "Cooking with Electricity : A Cost Perspective" on p. 122 – 124

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

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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):

The deviation will allow for the registration of a project implementing electric cooking devices and proposes a robust method to accurately quantify emission reductions from the displacement of non-renewable biomass. As the method does not rely on user interviews but measured data for monitoring, it can be assumed to be highly transparent and reliable.
In the electricity consumption study, users will be asked to cook exclusively with electricity for the duration of the study and be incentivised to do so e.g. through free electricity units. Because of this incentive structure, the study is more likely to overestimate electricity consumption than underestimate it. As a result of this, the substitution factor will be smaller, i.e. it will be assumed that 1 kWh of electricity displaces less biomass than it does in reality. This again will lead to an underestimation of emission reductions and therefore ensure conservativeness.

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

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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):

As the project cannot be registered without the deviation, there is no alternative scenario to which the impacts of the deviation could be compared. Nonetheless it can

be said that the deviation will certainly ensure high data quality as it enables monitoring project impacts in a transparent and reliable way using electricity meters. Emission reductions will be calculated in an accurate way based on empirical data and without the need to rely on user interviews.

The deviation does not affect safeguarding principles or project design as it merely concerns the method of quantifying displaced biomass.

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

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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.)*

- Preliminary PDD
- Emission reduction calculation sheet
- Cooking with Electricity : A Cost Perspective, Worldbank, 2020
- Example calculation demonstrating shortcomings of CDM methodology AMS-I.E. for electric cooking devices