SUMMARY OF CHANGES: SIMPLIFIED METHODOLOGY FOR CLEAN AND EFFICIENT COOKSTOVES V2.0

JANUARY 2021

The Simplified Methodology for Clean and Efficient Cookstoves v2.0 replaces the Simplified Methodology for Efficient Cookstoves V1.1. This document provides a summary of the key updates and relevant changes.

No.	Section	Further clarification	Newly updated/changed
1	Section 1| Definition	Definitions sections included, containing definitions for: a. Double counting b. Technical life c. Technology d. Batch	a. Double counting: Occurs when the same emission reduction is used more than once to achieve mitigation obligations, as a result of double issuance, double-use, or double-claiming. b. Technical life: Average time for which the project technology may continue to be operated for an extended period in a safe manner and with minimal loss of performance. c. Technology: In this methodology, the single or multiple technologies and/or practices applied in the project activity that result in emission reduction. d. Batch: is defined as the population of the device of the same type commissioned during a certain period of time (e.g. week

			or month) in a certain calendar year. To establish the date of commissioning, the Project Participant may opt to group the devices in "batches" and the latest date of commissioning of a device within the batch shall be used as the date of commissioning for the entire batch.
2	2.1| Scope	Key provision to support progressive distribution of project technologies	Project may involve progressive distribution of technology where implementation of the technology may occur in a gradual manner and adoption can increase over the project's crediting period.
3	2.2| Applicability	Prescribing a maximum annual ER threshold for projects/activities	The methodology is applicable to the project activity that reduces or displace no more than 10,000 tCO_2eq per crediting year (i.e., 365 days).
4		Clarification on the meaning of the word 'primary' in primary baseline fuel	Where 'primary' means in case of fuel mix situation more than 90% thermal energy needs are being met with wood or charcoal
5		Prescribing a maximum threshold of baseline efficiency of charcoal stoves	The project stove must have rated efficiency of at least 20% for wood fired stove and 20% Or XX% for charcoal fired stove;
6	2.3| Safeguards	Prescribing project safeguards	a. The project shall not undermine or conflict with any national, sub-national or local regulations or guidance for thermal energy supply or fuel supply or use for household cooking. (See Data/Parameter SMEC 5). b. If the expected technical life of project technology (See Data/Parameter SMEC 6) is shorter than the crediting period, the project developer shall describe measures

			to ensure that end users are provided replacement technology of comparable quality at the end of the technical life, by either replacing with comparable or better technology, or retrofitting essential parts with performance guarantee. If neither of the prior conditions can be demonstrated, no emission reductions can be claimed for the technology after its technical life has ended.
7	3.1| Project Boundary	Elaborating the definition of project boundary	a. Where the baseline fuel is woody biomass (including charcoal), the project boundary also includes the area within which this woody biomass is grown and collected. b. For projects using processed fuels, this boundary also includes the baseline and project fuel production (e.g. charcoal). c. In cases where the project activity introduces the use of a new biomass feedstock into the project situation, the fuel production and collection area is the area within which this new biomass is produced, collected and supplied.
8	3.2| Demonstration of additionality	Including key criteria for demonstration of additionality	The project developer shall demonstrate that the project could not or would not take place without carbon finance. Possible reasons for the need for carbon finance may be that the initial investment or the on-going marketing, distribution, quality control, manufacturing and

			maintenance costs are unaffordable for the target population. The project developer shall demonstrate additionality by conforming to additionality requirements of one of the options below, a. Applicable GS4GG Community Services Activity Requirements; b. CDM Tool 01 - Tool for the Demonstration and Assessment of Additionality; c. CDM Tool 21 – Demonstration of additionality of small-scale project activities; d. An approved Gold Standard VER additionality tool
9	3.3| Baseline Scenario	Redefining the baseline scenario	The project developer shall define the baseline scenario as the existing baseline technology/practice use and fuel consumption patterns for household cooking provided by the project technology in the population targeted for adopting the new project technology, i.e., "target population".
10	3.4| Selection and justification of the baseline scenarios	Including new criteria for selection and justification of the baseline scenarios	a. The selection of the baseline scenario must be adequately described, with all technologies that may be replaced by the project technology considered, such as the presence and usage practices of multiple baseline technologies by the target population ("stove-stacking"). It is

			not legitimate to compare the project to only the most inefficient technology being used by the target population. b. Project developers must consider distinct baseline scenarios depending on fuel type, baseline technology use patterns and target population. c. A different baseline scenario is not necessarily required for each different technology in the project activity. d. In project activities targeting multiple distributed technologies e.g. improved cookstoves and safe water supply, cross-effect between the baseline and project scenarios including potential leakage must be accounted for.
11	3.7| Changes to the baseline and project scenarios	Including provisions to make changes to the existing baseline and project scenarios	New baseline and project scenarios can be added to a project during the crediting period, by following the Design Change Requirements. When a new baseline or project scenario is created, the baseline and/or project studies, respectively, must be conducted prior to verification and crediting with respect to the new scenario. Emission reductions cannot be credited for a new project scenario, or in relation to a new baseline scenario, until the respective project studies or baseline studies have been conducted and the request for design change has been approved.

12	3.11| Data and parameters not monitored	Inclusion of new data and parameters not monitored to ensure consistency across all new ICS/distributed technology methodologies	a. SMEC 1 - Project technology description b. SMEC 2 - Avoidance of double counting or double claiming among project participants c. SMEC 3 - Avoidance of double counting or double claiming with other mitigation actions d. SMEC 4 - Indoor air pollution (IAP) levels of the project technology e. SMEC 5 - Regulatory framework for provision of thermal energy services f. SMEC 6 - Expected technical life of project stove g. SMEC 7 - Baseline scenario survey results
13	4.1| Monitoring data and information requirements	Updating the definition and requirements for projects database	The project database lists all the project technology units that have been sold or distributed by the project and have not surpassed their technical life. It is derived from the total sales record (or dissemination record in case of non-commercial distribution) and must be maintained continuously. Within the database, project technologies units are labelled, at a minimum, with their corresponding project scenario 'p' and their date of sale/dissemination. Technologies aged beyond their technical life, and not replaced or retrofitted, are removed from the project database and no longer credited
14		Introducing restrictions on cross-VPA sampling to ensure consistency across all new ICS/distributed technology methodologies	Cross-VPA sampling is not allowed across groups larger than 10 VPAs, and cross-VPA sampling is not allowed for large scale PoAs. The requirements described here apply both when

			sampling is applied to a single VPA and to permissible cross-VPA sampling. For guidance, project developers may refer to the latest version of the CDM Guidelines for sampling and surveys for CDM project activities and programmes of activities for the type of sampling approach (simple random, cluster, stratified etc.) applicable to their project context.
15	4.2| Data and parameters monitored	Inclusion of new data and parameters monitored to ensure consistency across all new ICS/distributed technology methodologies	a. SMEC 12 - Avoidance of double counting or double claiming among project technology end users b. SMEC 13 - Fractional non-renewability status of woody biomass fuel during year y
16		Updating the measurement procedures for parameter 'Usage rate in project scenario p during year y ($U_{p,y}$)' to ensure consistency across all new ICS/distributed technology methodologies	There are three levels to the Usage Monitoring Requirements, each increasing in rigour and maximum claimable usage rates. In order to apply a higher level of usage rate, all of the Monitoring Requirements from the levels beneath must be followed. For example, if a project claims upto 90%, the monitoring requirements provided for both the 'mandatory' and 'good practice' level shall be complied with. The three levels and their applicability are summarised in the methodology parameter table. For detail guidelines and requirements, refer to Requirements and Guidelines: Usage Rate Monitoring. Should there be a conflict in the requirements provided in this methodology and Requirements

			and Guidelines: Usage Rate Monitoring, the requirements of this methodology supersede.
17		Updating the measurement procedures for parameter 'Usage rate in project scenario p during year y ($U_{p,y}$)' to ensure consistency across all new ICS/distributed technology methodologies	The initial efficiency of the project stove shall be measured/estimated as per any of the following options: a. The efficiency of the project cookstoves shall be based on certification by a national standards body or an appropriate certifying agent recognized by that body. b. Alternatively, manufacturer specifications on efficiency based on water boiling test (WBT) may be used. The WBT shall be carried out in accordance with national standards (if available) or international standards or guidelines (e.g., the WBT Protocol[12] or ISO 19867-1 listed by Clean Cooking Alliance and available at: https://cleancookingalliance.org/research-evidence-learning/standards-testing/protocols/) For (a) and (b) above, the sampling test of stoves by such certification bodies/agents or manufacturers shall be conducted following a 90/10 precision in accordance with the "Standard for sampling and surveys for CDM project activities and programme of activities".

[1] The project developer may conduct only the first two phases of the stove tests: cold-start high-power phase and hot-start high-power phase (not including the simmer phase) for calculation of the high-power thermal efficiency.

[2] The guidance provided in the WBT protocol may be followed for calibration of testing equipment.

			c. The following simplified approach may be used, when the efficient cookstoves are produced by a manufacturer with a recognized management system in place (e.g. ISO certification) to ensure that the individual equipment produced do not vary beyond the range of acceptance limits (e.g. characteristics such as materials, critical dimensions): i. Conduct a sample test on three stoves with three tests conducted for each project stove. The test can be carried out by project developer by themselves or stove manufacturers; ii. If the standard deviation of the nine test results indicated above is very small and 90/10 precision requirement is met (in this case, the value of the t-distribution for 90 per cent confidence shall be used instead of Z value), the efficiency determined is acceptable, otherwise more sample tests would be required until 90/10 precision is met. The loss in project stove efficiency shall be accounted for following any of the below

			options. The option should be identified and fixed ex ante for the entire crediting period in the PDD at the time of design certification. a. A default schedule of linear decrease in efficiency up to the terminal efficiency assumed as 20 percent for wood fired project stoves and 25 percent for charcoal project stove shall be applied through the technical life the project stove[3]; or

[3] For example, where the technical life of project stove is five years and project stove has an efficiency of 30 percent at commissioning. The underlying assumptions for this option are:

- The stove efficiency decreases linearly over time, i.e. at a constant rate which is equal to the difference between the initial and final efficiencies divided by the lifespan of the project device.
- The final value after the end of the life span will be 20%.

That means linear decrease in efficiency from 30 percent to terminal efficiency of 20 percent should be applied through the life span of 5 years the project stove. If fixed efficiency drop is applied on an annual basis, this would be 2 percent decrease in efficiency every year (i.e. 30% in year 1, 28% in year 2 and 22% on year 5).

However it is more accurate and conservative to consider a drop in efficiency throughout any given year of the crediting period as below:

- The decay of efficiency starts on day 1 of the operation, therefore the average efficiency of year 1 does not equal the initial efficiency; rather, it is the average of efficiency on day 1 and day 365 i.e. the average efficiency of a given year is applied for the entire year, calculated as the mid-value between the efficiency values at the start and end of that year.
- Efficiency at any other point in the year can be linearly interpolated. This means, applicable value for stoves that operated throughout year 1 (i.e. day 1 to day 365 from the start date of the crediting period) will be the average of 30 percent on day 1 and 28 percent on day 365, i.e. 29 per cent.

			b. Manufacturer of project cookstoves shall confirm with technical justification based on certification by a national standards body or an appropriate certifying agent recognized by that body that no decrease in efficiency of project device is envisaged during the crediting period; or c. Determine[4] the rate of efficiency drop for a representative sample of the first batch of project cookstove type in year y and assume that same rate of loss in efficiency applies to all other batches. In other words, it may be assumed that the degradation of efficiency measured in a representative sample of the first batch of each type of project stove apply to all subsequent batches. The efficiency of the project stove in the first batch has to be monitored annually through representative samples and this rate of loss in efficiency may be applied correspondingly to all batches. The project participants shall describe in the

- If some stoves have operated only for the part of the year 1 owing to the time required for distribution, then a daily drop in efficiency of 2/ 365 i.e.0.005 may be considered for the weighted average estimations (i.e. efficiency values of 29% in year 1, 27% in year 2 and 21% on year 5 are applied).

[4] For Example, for the representative sample of Batch 1, if the efficiency of a new project cookstove is 30% and at the end of Year 1, the efficiency is monitored to be 29%; the loss rate is (30%-29%)/1=1%. Then this 1% loss rate is to be assumed to be applicable for all the stoves in the first batch and subsequent batches for first year of operation.

			PDD the measures taken to ensure that all batches receive the same level of quality control in the production, and maintenance/replacements during the crediting period, as the first batch. Monitoring reports shall describe the number of actions taken for maintenance and replacements to all batches separately; d. Determine the loss in efficiency annually from a representative sample of each batch and use the actual loss rate that is measured
18	4.3|General requirements for sampling		For guidance, project developers may refer to the valid version of the "Guidelines for sampling and surveys for CDM project activities and programmes of activities" for the type of sampling approach (simple random, cluster, stratified etc.) applicable to their project context.
19	Annexures	Inclusion and/or updating of two annexes.	Annex 1 – Monitoring schedule (newly included) Annex 2 – Sample survey templates (included and updated)
