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| **NEW BASELINE AND MONITORING METHODOLOGY OR METHODOLOGICAL TOOL RECOMMENDATION FORM**  **(Version 01.0)** | |
| **Information to be completed by the Methodologies Expert Panel (mep)** | |
| **Date and number of the MEP meeting** | 7 - 11 July 2025 / MEP007 |
| **Type of standard** | New baseline and monitoring methodology |
| **Unique reference number** | A6.4-PNM004 |
| **Title** | Comprehensive Lowered Emission Assessment and Reporting (CLEAR) Methodology for Cooking Energy Transitions |
| **History of submission** | 21 April 2025: Submission received  MEP007: Clarifications/modifications requested from the proponent |
| **Section I. Information about the new baseline and monitoring methodology** | |
| **Short description of the types of project activities or programme of activities covered by the methodology** | |
| The CLEAR methodology is designed for crediting emission reductions from cooking projects. It is applicable for nearly all cooking energy transitions, including both efficiency improvements, fuel switch, and use of renewable energy sources, for which the technologies meet the performance applicability conditions. The sectoral scope of the methodology is Energy Demand. | |
| **Conditions under which the methodology is applicable** | |
| The methodology is applicable under the following conditions:  The methodology is applicable for project activities that would not occur in the absence of revenues from carbon credit sales, which must be demonstrated by following the additionality requirements described in section B.9 of the methodology. There is no restriction on the number of households involved or the total emission reductions achieved.  To qualify to use this methodology, projects must meet the following criteria.   * Project cookstoves shall be identified with a unique identifier affixed to the cookstove in order to avoid double counting of emission reductions by other mitigation actions. * All projects must identify and replace or retrofit malfunctioning cookstoves with a technology of comparable or better quality and thermal efficiency, or not claim emission reductions for households when such failures occur. Projects must include a documented plan for this process at the project design phase. * All biomass-burning project cookstove models must be tested for thermal efficiency using the International Organization for Standardization (ISO) Standard 19867-1:20184. For wood-burning project technologies that use a griddle surface (e.g., plancha cookstoves for making tortillas), the thermal efficiency requirement is 20% or higher. Project cookstoves burning charcoal must achieve 30% or higher. All other biomass-burning project cookstoves must achieve 25% or higher. | |

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| Caveats and restrictions:   * Projects must follow any relevant carbon-crediting program requirements for avoiding long-term lock-in of fossil fuels for cooking. * For artisanal cookstoves, at least three randomly selected samples of each cookstove model must be used when testing for ISO thermal efficiency, and when undertaking Controlled Cooking Tests. * For biogas projects, this methodology is only applicable to those using a Continuously Tracked Energy Consumption (CTEC approach). It calculates emission reductions only from cooking fuel consumption, not the use of generated slurry. * For CTEC projects, fuel sale records can be used to track consumption of pellets, LPG, and ethanol where LPG and ethanol fuel delivery systems are designed exclusively for use in a specific project technology. Projects shall implement safeguards to prevent fuel diversion for non-project activities.   - This methodology is not applicable for households who use electricity as their primary baseline fuel. |
| **Summary of the methodology (including project boundary, baseline scenario, baseline approach, additionality, baseline emissions or removals, project emissions or removals, leakage, emission reductions or removals, non-permanence and reversals and monitoring)** |
| **Project boundary:** The physical, geographical sites where project technologies operate including the location from which baseline and project fuels are produced or collected. In case of electric stoves, the grid and its power plants are included.  **Business-as-usual-scenario and emissions:** continuation of the prevailing cooking technologies and fuel consumption patterns in the absence of the project activity (unless the baseline scenario violates legal requirements but not if it can be justified that these are not enforced)  **Baseline scenario and emissions:** An approach based on existing actual or historical emissions, adjusted downwards to ensure alignment with paragraph 33 of the RMP  **Project emissions or removals:** Calculated by multiplying the energy consumption with the fraction of non-renewable biomass and the CO2 and non-CO2 emission factor of the project fuel. Electricity-related emissions are added.  **Leakages:** Baseline equipment transfer and competition for resources  **Emission reductions:** 𝐸𝑅𝑦=(𝐵𝐸𝑦−𝑃𝐸𝑦)(1−𝐿𝐸𝑦)  **Additionality:** The procedure to demonstrate additionality is based on the additionality standard A6.4- SBM015-A11. Demonstration of additionality in mechanism methodologies Version 1.0, but differs as it excludes a formal investment analysis. Instead, it requires project proponents to include financial viability information and uses barrier analysis.  **Monitoring:** Mostly based on the cooking energy consumption. |
| **Section II. Information about the new methodological tool** |
| **Conditions under which the methodological tool is applicable** |
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| **Summary of the methodological tool (including the calculation of baseline emissions or removals, project emissions or removals, leakage, emission reductions or removals, non-permanence and reversals and monitoring)** |
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| **Section III. Recommendations to the Supervisory Body** |
| Approve the proposed new methodology or methodological tool (“A case”) |

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| Reject the proposed new methodology or methodological tool (“C case”) |
| **Section IV. Clarifications or modifications requested** |
| **General issues**   1. Paragraph 10 of the standard “Setting the baseline in mechanism methodologies” (A6.4-STAN- METH-004), hereinafter referred to as “Baseline standard”, requires mechanism methodologies that activity participants describe the pre-project scenario. Please insert a respective section in the methodology. This section has now been added to CLEAR.   **Baseline approach from paragraph 36 of the RMPs**   1. This section is not aligned with the baseline standard, section 6.3 and more generally the requirement for crediting baselines in the baseline standard. The CLEAR methodology has been revised to align with the Article 6.4 baseline standard. 2. The proposed methodology does not seem to have considered para. 58 of the baseline standard and must provide consideration and justification related to how this requirement related to remaining lifetime of baseline equipment is applied, considering the different applicable baseline stove types. Section B.5.5.2 of form 002 “Identification of the baseline scenario” now includes language addressing the validity of the baseline scenario in relation to the expected remaining lifetime of the baseline stoves. 3. The proposed methodology does not seem to have considered para. 60 of the baseline standard that pertains to the baseline scenarios to be considered. The methodology must include either a pre-determined baseline scenario or a procedure to determine the baseline scenario, but in either case the identification and selection of the baseline scenario must be justified, and if it is pre- determined in the methodology, there should also be adequate supporting evidence; Section B.5.5.2 of form 002 “Identification of the baseline scenario” now includes language indicating that under the CLEAR methodology, project proponents are required to use a pre-determined baseline scenario, defined as the continuation of the pre-activity cookstoves currently used by households. 4. The proposed methodology has not considered whether potential trends in the baseline are relevant in accordance with paragraph 61(a) of the baseline standard. The following language has been added to Section B.5.5.3. Calculation of baseline emissions or removals: “For both CTEC and non-CTEC projects, baseline fuel consumption and emission estimates derived from KPTs, CCT-based ratios, or global defaults are not subject to trend analysis. Each of these approaches reflects typical stove performance and usage as a snapshot in time, rather than a multi-year dataset capturing historical variability or long-term trends. The global defaults also represent the minimum level of service, which is not subject to trends. Accordingly, no trend analysis is applied to baseline fuel consumption values derived under any of these approaches.”   **Downward adjustment(s)**   1. The proposed methodology does not align with the requirements of section 7.1 of the baseline standard (downward adjustment in the calendar year of the start date of the first crediting period) for a baseline applying approach 36(iii) of the RMPs, as selected by the methodology. The methodology must comply with these provisions of the baseline standard. A proposed approach to deal with downward adjustments for CTEC and non-CTEC projects has been added to the CLEAR methodology. This approach applies an initial downward adjustment of the baseline in the calendar year of the start date of the crediting period, based on the lower bounds of the 95% confidence intervals of baseline energy consumption assessed through Kitchen Performance Tests, and applies standard annual downward adjustments thereafter. While the Article 6.4 Standard: Setting the baseline in mechanism methodologies calls for a minimum initial downward adjustment of 10% of the expected emissions reductions for all sectors, CLEAR proposes in the case of cooking projects an initial minimum of 5%. This approach maintains the intended safeguard function of the 10% requirement because the CLEAR methodology ensures that the original baseline itself, before the application of any downward adjustment, is already based on rigorous accurate measurement and conservative assumptions. CLEAR’s proposed 5% instead of 10% reflects a prioritization of accuracy over undifferentiated conservatism, given CLEAR’s direct measurement requirements already in place, a conservative baseline determination, multiple safeguards that mitigate baseline-related risks, and further layers of conservatism to safeguard against over-crediting. These combined safeguards provide a level of conservatism at least equivalent to that of a 10% minimum downward adjustment applied to a baseline that was not subject to the same rigorous statistical requirements.   Non-CTEC projects have the option to use conservative global default values for energy consumption, which represent the minimum level of energy service required for household cooking. In these cases, the BAT approach is used, so no downward adjustment is applied for the initial calendar year. We request an exemption to the downward adjustment requirements annually thereafter.  We note here that CLEAR has significantly changed the balance of accuracy, conservativeness, and cost-effectiveness relative to prior cookstove methodologies. In the methodology development process, we have built consensus across the sector around the need for accuracy in cookstove carbon accounting. To this end, we have analyzed the primary sources of over-crediting, including areas of uncertainty, and applied a pragmatic sectoral approach to reducing risk in each area. Therefore, the emission reductions that result from this process should be considered conservative by definition. The decision to apply a uniform fixed downward adjustment ignores this process and upsets the resulting balance that CLEAR achieved, and in doing so endangers the viability of the entire cookstove carbon sector.*While we have included a downward adjustment approach to meet A6.4 requirements, we strongly recommend that the downward adjustment approach not be applied under CLEAR or that it be applied only with a very light touch.*   1. The proposed methodology already includes some elements that may be considered to result in intentionally lower baselines, such as applying a default efficiency of 15% for three-stone fires (higher efficiency than many values in the literature for such stoves). Such elements potentially could be incorporated in the initial downward adjustment; however, justification should be provided, and, in addition, a downward adjustment would be required for all baseline technologies and practices and quantification and monitoring approaches. A proposed approach to deal with downward adjustments for CTEC and non-CTEC projects has been added to the CLEAR methodology, as described in the response to Comment 6. 2. Section 5.5.5. Application of downward adjustment fails to align with section 7.1 paragraph 64 of the baseline standard: i.e. either (a) quantify the uncertainty-based downward adjustment, calculate the minimum adjustment against activity emissions, and then compare the two adjustments and choose the more conservative, or (b) propose a different approach but considering the minimum downward adjustment against activity emissions. In the case of applying paragraph 64 (b), this would require justification. A proposed approach to deal with downward adjustments for CTEC and non-CTEC projects has been added to the CLEAR methodology, as described in the response to Comment 6. 3. The downward adjustment in subsequent years is not applied in accordance with section 7.2 of the baseline standard. According to para. 65 of the baseline standard, a downward adjustment shall be applied in all calendar years. Furthermore, according to paragraph 66 of the baseline standard, exemptions to this requirement do not apply to a baseline approach following 36(iii) of the RMPs, which has been selected by the proposed methodology. A proposed approach to deal with downward adjustments for CTEC and non-CTEC projects has been added to the CLEAR methodology, as described in the response to Comment 6.   **Comparison and selection of crediting baseline**   1. Provisions are missing in the methodology for operationalizing the requirement in section 9 of the baseline standard, i.e. the methodology must include the comparison of the conservative BAU and downward adjusted baseline for the entire crediting period and choose the lower of the two, and all other provisions of the section 9. This has been addressed in section B.5.5.4. “Difference between BAU and baseline emissions or removals” of Form 002.   **Leakage**   1. No applicable comment(s) in this round. |

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| **Calculation of emission reductions**   1. Line 1009: Provide a definition of what "end of the monitoring period" is --- e.g., “within plus or minus two months of the last date of the monitoring period" or similar. “End of the monitoring period” has been revised to “within the last four months of the monitoring period” in the updated CLEAR methodology. 2. In case of CTEC projects that use fuel sale records to track consumption of pellets, LPG or ethanol, the methodology should introduce a cross-check on measured fuel amounts, as a further control on potential fuel diversion. This may, for example, be operationalized in the monitoring methodology section. We have added a requirement that project proponents cross-check household fuel consumption tracked through fuel sale records against average project energy consumption values. Any outliers must be justified, or the household excluded. 3. Section 9, Baseline energy consumption defaults and caps: Please use a table or other format to facilitate reading and application of the defaults and caps. A table with the baseline energy consumption defaults and caps has been added to Section B.5.5.3 Calculation of baseline emissions or removals in Form 002 and to Section 9 of the original CLEAR methodology document.   **Additionality**   1. This section lacks explanatory text that explains and justifies the approaches, using evidence, and in line with the requirements of the Additionality standard. The CLEAR methodology additionality section has been revised to better align with the Article 6.4 Additionality standard. 2. Regulatory analysis: The current regulatory analysis is not appropriate. In section B.9, Step 2, on page 42 of the submitted A6.4-FORM-METH-002: the approach mentions an exemption from considering legal requirements enforced, but this is not in line with the additionality standard. Please revise the regulatory analysis to fully align with the requirements of the Additionality Standard. The CLEAR methodology regulatory analysis has been revised to better align with the Article 6.4 Additionality standard. 3. Barrier analysis: The additionality section would benefit from providing a clear step-wise procedure for undertaking barrier analysis on an activity-by-activity basis, in line with the requirements of paragraph 56-59 of the additionality standard. The barrier analysis section has been revised in the manner suggested. 4. Common practice analysis: The additionality section mentions common practice analysis; however, the methodology would benefit from providing a clear step-wise procedure that guides activity participants through each element of the common practice analysis. At a minimum it should include the steps and specify: the approach to be used (approach B), the indicator for common practice to be used in this analysis, the threshold for the common practice factor (including the rationale for the specified value for the threshold), and any other additional parameters need for the analysis etc. Please embed this procedure directly in the methodology or reference the common practice tool (currently under development by the MEP), once this is approved. A draft version for public comment (A6.4-MEP007-A01 - Draft Methodological tool: Common practice analysis) was published by the MEP at its seventh meeting (MEP007). The common practice analysis section has been revised in the manner suggested.   **Monitoring methodology**   1. Sampling: The methodology lacks clear guidance on whether age-based stratification is required when selecting samples for monitoring surveys, KPTs and CCTs. Specifically, it is not indicated whether sampling should be considered by stove age groups (e.g., <1 year, 1–2 years, >2 years) with minimum representation or whether a single random sample across all installed stoves is sufficient. Please include clarification and justification on this issue. Age-based stratification requirements have been added to Appendix 10 (Sampling requirements and best practices). 2. The Article 6.4 standard and guidance on sampling is under preparation and the methodology may include a placeholder for their application once they become available. The following language has been added to Section B.10.5 of form 002 and Appendix 10 of the original CLEAR document: “the sampling requirements and guidance included in the CLEAR methodology may be revised in accordance with forthcoming Article 6.4 standard and guidance on sampling.”   **Other matters**   1. The methodology may address suppressed demand in line with the proposed standard, “Addressing suppressed demand in mechanism methodologies,” recommended for approval by MEP007, and shall do so if the standard is approved by the Supervisory Body. Reference to this standard (which we see has now been published) has been added to the definition of suppressed demand in Form 002, and to the section that introduces the suppressed demand-based global default option. 2. The monitoring period duration should be at the discretion of the activity proponent. Fixing a maximum two years for the monitoring period can impose administrative and procedural challenges. It is suggested to change the maximum two-year monitoring period to a recommendation. The definition of Monitoring Period has been revised in Form 002 to recommend (but not require) that monitoring periods be two years maximum, given that Kitchen Performance Tests must be conducted at least every two years regardless of the length of the monitoring period. CLEAR requires that KPTs must be conducted at least every 2 years because they are meant to capture fuel consumption over time. Fuel consumption can change too much in longer time periods (e.g. 3-5 years) for measurements conducted at this frequency to be an accurate representation of fuel use over the entire time period. 3. The proposed methodology refers to third party tools which have not been approved by the Supervisory Body to the Article 6.4 Mechanism. Article 6.4 Mechanism methodologies, tools and guidance must be applied wherever possible.  * Please avoid permanent reference to CDM methodologies or tools, or methodologies, tools and standards pertaining to independent carbon crediting programs, as requirements for following the methodology. References to the “Gold Standard Safeguarding Principles & Requirements” and the “Gold Standard SDG Impact Tool” have been deleted and replaced with references to the Article 6.4 Sustainable Development Tool. The only references to CDM Tools left in the methodology include a sentence noting that CLEAR disallows the use of CDM TOOL30 and a newly-added reference to CDM TOOL33, per guidance from UNFCCC comment below (comment #24). * Electricity emission factors (grid or otherwise) shall be derived following Article 6.4 Mechanism tools, and these are currently under development. A placeholder may be included in the proposed new methodology for these tools in the meantime. Reference to the forthcoming Article 6.4 Mechanism tools to derive electricity emission factors has been added. * The following references may be acceptable in the context of the proposed methodology, subject to future decision by the Supervisory Body:   + ISO Standards   + CCA-hosted testing protocols   + IPCC guidelines   + UN agencies publications  1. fNRB: It is encouraged to incorporate the CDM TOOL33 values directly in the methodology as proposed default values for fNRB. Further, since Tool 33 proposes possibilities of new approaches, consider references to those approaches for fNRB assessment, as well. The CDM TOOL33 values have been incorporated directly in the methodology as proposed default values for fNRB. The TOOL33 default fNRB values are listed in Appendix 11 of the CLEAR methodology. 2. Following a call for public comments on this methodology, a number of comments were received raising issues and proposing changes. We thus urge the methodology proponent to take into account these comments and as appropriate, amend the proposed methodology. We’ve reviewed all public comments and revised the methodology as appropriate, addressing technical comments, adding clarity and more directive guidance where requested, and fixing editorial errors detected. |

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| **Non permanence and risks of reversals**   1. Although the methodology is not built around the concept of removals and risks of non- permanence, the ultimate impact of the activities is a reduction in the consumption of wood from forests, which ultimately either (i) leads to an increase in carbon stocks or (ii) decreases the drop in carbon stocks. While activities foreseen under this proposed new methodology are not themselves prone to “risks of reversals”, the carbon stocks which it affects are, although noting that potential changes which could lead to reversals are unrelated to the activity. These may include clearing for agriculture, logging or other land-use change, etc.    * Please refer to the Concept Note “Applicability of removal guidance to emission reduction activities and vice versa” finalized at MEP007, particularly section 3, “Key issues and proposed solutions”, and include a proposal on how to explicitly address the risk of non- permanence.   The Concept Note “Applicability of removal guidance to emission reduction activities and vice versa” (A6.4-MEP007-A03) states that the “Requirements for activities involving removals under the Article 6.4 mechanism” (A6.4-STAN-METH-002) applies to emission reduction activities with reversal risks, like CLEAR. However, the Concept Note also states that exemptions apply only to activities in which:   * GHG reservoirs are not under the control of the activity participant * GHG reservoirs are not in the same location as where the mitigation activity is implemented * Changes observed in the greenhouse gas reservoir could not be attributed to the mitigation activity.   All of these conditions apply to the activities that CLEAR supports: 1) People harvesting wood rarely have full control over the forests and woodlands from which they harvest; 2) many projects seek to reduce charcoal consumption in urban or peri-urban areas, while the charcoal is produced in distant rural woodlands; and 3) any reversals to wood growth would be the result of unrelated activities such as agricultural expansion, timber extraction, infrastructure expansion, or wildfires.  Based on this CLEAR now includes a requirement for a risk assessment, which will be further clarified pending the finalization and publication of the reversal risk assessment tool.  *Of note, while we have added this risk assessment requirement, for the reasons detailed in Form 002, we have concerns about the practicality and validity of risk assessments for non-permanence related to fuelwood savings from clean cooking project activities.*  **The methodology proponent is kindly encouraged to submit the requested response to the clarifications and where necessary please consider submitting the revised version of the proposed methodology on or before 13 August 2025. (please refer to paragraph 29 of the Procedure: Development, revision and clarification of methodologies and methodological tools (v01.1) at** [**https://unfccc.int/sites/default/files/resource/A6.4-PROC-METH-001.pdf**](https://unfccc.int/sites/default/files/resource/A6.4-PROC-METH-001.pdf)  Thank you again for the extension through 22 August 2025. |

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Document information

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