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Draft mechanism methodology: Energy efficiency measures in household cooking (version 01.0)

Item	Section no. (as indicated in the document)	Paragraph/Table/Figure no. (as indicated in the document)	Comment (including justification for change)	Proposed change (including proposed text)
1	COVER NOTE	-	We commend the Methodological Expert Panel (MEP) for developing a data-driven, empirically grounded framework that systematically addresses historical vulnerabilities in clean cooking carbon accounting. Establishing mathematically objective and conservative mitigation outcomes is essential for the environmental integrity and credibility of the Article 6.4 mechanism. However, as currently drafted, the methodology inadvertently introduces compounding layers of statistical and structural conservatism. While these parameters are theoretically robust in isolation, their cumulative application risks creating unintended barriers to entry, rendering the mechanism economically and logistically unfeasible in Least Developed Countries (LDCs). Currently, over 900 million people lack access to clean cooking, overwhelmingly concentrated in Sub-Saharan Africa and developing Asia (IEA, 2023). Subjecting off-grid, low-income contexts to aggregated benchmarks optimized for higher-income settings creates a "stacked conservatism" that jeopardizes the financial viability of these vital interventions. To ensure the methodology fulfills the dual mandate of the Paris Agreement—delivering an overall mitigation in global emissions (OMGE) while fostering sustainable development and expressly accommodating the special circumstances of LDCs (Article 4.6)—the framework must balance academic rigor with operational reality. We respectfully submit the following refinements to establish a framework of "developmentally calibrated conservativeness," ensuring the methodology remains robust without inadvertently excluding the world's most vulnerable populations from climate finance.	

2	BASELINE SCENARIO	Section: 7.3.1. Procedure for the identification of the baseline scenario Paragraph/Table/Figure No.: Paragraphs 44 and 45 [Option 1]	Reconciling the "Ambitious Benchmark" with the mandate to address Suppressed Demand (RMP Paragraph 33) and Baseline Standard requirements. We strongly support Paragraph 44, which successfully operationalizes Suppressed Demand by setting a normative minimum useful energy floor (0.001095 TJ/person/year, or ~3 MJ/day). This appropriately protects populations experiencing severe energy poverty from being penalized for historically low fuel consumption. However, Option 1 (Paragraph 45) mandates that this suppressed demand energy volume must be evaluated against an "Ambitious Benchmark" efficiency of 16.6% (fuelwood) or 23.6% (charcoal), representing the top 20% of a mixed market. This creates a methodological and socioeconomic contradiction. From an equity perspective, Suppressed Demand corrects for historical deprivation. Peer-reviewed literature extensively documents that populations experiencing suppressed energy demand rely almost exclusively on zero-capital technologies—predominantly the traditional three-stone fire or basic artisanal stoves, operating at ~10% to 11.8% thermal efficiency (Bailis et al., 2015; Urban et al., 2025). Furthermore, applying this high-efficiency benchmark conflicts with the overarching A6.4 Standard: Setting the baseline in mechanism methodologies (A6.4-STAN-METH-004, Paragraph 52(b)), which explicitly requires that benchmarks be based on comparable activities in "similar social, economic, environmental, and technological circumstances." By mathematically adjusting a suppressed demand energy volume through a top-quintile 16.6% efficiency filter, the methodology models that a population simultaneously resource-constrained enough to require a basic energy survival floor, yet wealthy enough to universally possess advanced market appliances. In LDCs, where autonomous adoption of improved clean cooking technologies is statistically negligible without intervention, this approach disproportionately truncates the creditable emission reductions necessary to physically cross-subsidize hardware for the ultra-poor.	Decouple the Ambitious Benchmark efficiency constraint from populations demonstrating Suppressed Demand or residing in LDCs. This aligns with the equity principles of the Paris Agreement (Article 4.6), the Suppressed Demand mandate of the RMPs (Paragraph 33), and the socioeconomic comparability requirements of A6.4-STAN-METH-004. Proposed text addition to Paragraph 45 - [Insert as a new sub-paragraph after Option 1 description]: "Exemption to Operationalize RMP Paragraph 33: To operationalize Article 4.6 of the Paris Agreement and adhere to the socioeconomic comparability requirements of A6.4-STAN-METH-004 (Paragraph 52(b)), activities physically implemented in Least Developed Countries (LDCs), or serving populations whose pre-activity consumption is empirically demonstrated to be below the 0.001095 TJ/person/year threshold, shall be exempt from the Ambitious Benchmark efficiency constraint. For these specific populations, the baseline energy consumption shall be calculated by pairing the standardized useful energy value (0.001095 TJ/person/year) with the conservative Business-As-Usual (BAU) efficiency defined in Table 4 (e.g., 11.8% for fuelwood). This ensures baselines accurately reflect the true socio-economic and technological constraints preventing autonomous appliance adoption, while maintaining a mathematically conservative energy floor."

3	NON-PERMANENCE PROVISIONS	Section: 10.2. Buffer pool contributions Paragraph/Table/Figure No.: Paragraphs 100, 101, and Equation (33)	Aligning non-permanence provisions with the thermodynamic reality of emissions avoidance, preventing risk double-counting, and ensuring consistency with A6.4-STAN-METH-007. Section 10.2 mandates that decentralized thermal energy activities apply a 100-year reversal risk assessment tool and surrender A6.4ERs into a Reversal Risk Buffer Pool (to be immediately cancelled). While safeguarding the mechanism registry from reversals is a necessary protocol for Land Use, Land-Use Change, and Forestry (LULUCF) biological sequestration projects (removals), applying this requirement to demand-side energy efficiency introduces a fundamental greenhouse gas (GHG) accounting misalignment and an internal regulatory contradiction. First, foundational GHG accounting establishes a strict distinction between sequestration (the storage of carbon in a reversible biological or geological stock) and avoidance (the irreversible reduction of an emissions flux). When an efficient cookstove averts the combustion of biomass, the thermodynamic emission of those specific GHGs is permanently avoided. If a macro-level disturbance (e.g., commercial logging or agricultural expansion) subsequently clears that forest boundary, that constitutes a separate, new emission source in the landscape—not a physical reversal of the household's avoided combustion. Second, the requirement contradicts the methodology's own application of overarching PACM standards. A6.4-STAN-METH-007 (Standard: Addressing non-permanence and reversals in mechanism methodologies), Paragraph 13(c), permits alternative approaches when "changes observed in the greenhouse gas reservoir cannot be attributed to the mitigation activity." Footnote 14 of that Standard provides a definitive example: "This could apply, for example, to a cookstove efficiency project that reduces demand for non-renewable biomass, and that biomass is collected by individuals from forests on publicly held lands located a few kilometres from their residences. Neither the cookstove project owner nor the participating households have control over the forests from which biomass is sourced. The public entity could implement forest management	Acknowledge the thermodynamic permanence of avoided emissions by exempting demand-side energy efficiency projects from reversal buffer contributions, relying entirely on the fNRB mechanism to address reservoir depletion risk. Proposed text revision for Paragraphs 100 & 101 (Merge and Replace): "100. The mitigation outcome generated by energy efficiency measures in household cooking is the irreversible thermodynamic avoidance of a combustion event. Because the activity does not involve the active biological sequestration of atmospheric carbon (removals), the quantified emission reductions are not subject to physical reversal. Consequently, activity participants applying this methodology are exempt from applying the reversal risk assessment tool and are not required to contribute credits to the Reversal Risk Buffer Pool Account. The risk of macro-level reservoir depletion shall instead be structurally managed through the periodic updating of the Fraction of Non-Renewable Biomass (fNRB) parameter. 101. Consequently, activity participants applying this methodology are exempt from applying the reversal risk assessment tool and are not required to contribute A6.4ERs to the Reversal Risk Buffer Pool Account. The risk of macro-level reservoir depletion and non-permanence shall instead be structurally managed and mitigated ex-ante through the mandatory periodic updating of the Fraction of Non-Renewable Biomass (fNRB) parameter at each crediting period renewal."

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			practices that enhance biomass stocks, unrelated to the impacts of the project; similarly, the public entity could implement harvesting that would reduce biomass stocks, once again affecting the reservoir but unrelated to the impacts of the project." While Appendix 7 of this draft methodology (Paragraph 36) correctly invokes this "No Control" status to waive continuous ex-post monitoring, it inconsistently mandates the use of a 100-year forestry risk assessment tool on a landscape the developer does not control to calculate an upfront cancellation. Imposing sovereign, uninsurable land-use risks on decentralized appliance distributors will severely deter project finance in LDCs. Finally, imposing a buffer contribution creates a mathematical double-penalty. The methodology already applies the fNRB parameter (Equation 2), which systematically discounts crediting ex-ante based on the precise risk of forest reservoir degradation and depletion. Assessing an additional 100-year reversal buffer deduction on the remaining, already-discounted A6.4ERs penalizes the activity twice for the same overarching land-use risk.	

4	ACTIVITY SCENARIO	Section: 8.2.3. Adjustment for the potential impact of the Hawthorne effect Paragraph/Table/Figure No.: Paragraph 96	Aligning the Hawthorne effect adjustment factor (HEind) with cited empirical science and the infrastructural realities of Least Developed Countries (LDCs), preventing discriminatory market barriers. Paragraph 96 imposes a punitive default Hawthorne effect penalty (HEind = 0.75), effectively capping claimable emission reductions at 75% for activities relying on manual Kitchen Performance Tests (KPTs) without the deployment of Continuous Stove Use Monitors (SUMs). While we strongly support the MEP's strategic objective to transition the market toward objective digital MRV (dMRV), establishing an immediate, severe 25% deduction creates a misalignment with both empirical behavioral science and the infrastructural realities of LDCs. First, the magnitude of the proposed 25% penalty contradicts the methodology's own evidentiary basis. As explicitly noted in the draft's explanatory text (Appendix 7), comprehensive evaluations—including the 2025 study by the Berkeley Air Monitoring Group (BAMG)—"did not find evidence of a strong Hawthorne Effect" in biomass energy initiatives in Africa. Furthermore, peer-reviewed behavioral economics literature demonstrates that subsistence cooking with gathered biomass is highly inelastic (Dickinson et al., 2013; Bensch & Peters, 2015). The severe physical labor and time poverty associated with gathering fuelwood inherently constrain a household's ability to artificially inflate fuel consumption simply to satisfy an enumerator's presence. Imposing a definitive 25% penalty based on contested literature, while acknowledging contrary evidence from large-scale field studies, is arbitrary rather than conservative, conflicting with the principle of Accuracy (A6.4-STAN-METH-004, Paragraph 8(a)), which requires uncertainties to be reduced "as far as is practical.". Second, penalizing activities for lacking SUMs telemetry inadvertently penalizes host countries for macroeconomic infrastructural deficits. Peer-reviewed studies on remote sensor deployments in off-grid LDC contexts (Thomas et al., 2021; Lombardi et al., 2022) highlight staggering data attrition rates—often exceeding 20% to 30%—due to extreme thermal shock, dust, battery degradation, and the absence of cellular networks required for data retrieval.	Recalibrate the default Hawthorne adjustment factor to reflect the methodology's own cited science regarding the constrained nature of observer bias in solid-biomass contexts. Establish a developmentally calibrated default (e.g., 0.90) in a time bound manner to avoid discriminatory penalization of regions where continuous SUMs telemetry cannot currently be reliably deployed. Proposed text revision for Paragraph 96: "96. [Option 1]: Otherwise, project emissions are adjusted to account for the Hawthorne Effect, such that in equation (31), HEind equals an empirically calibrated default value. Recognizing that comprehensive field studies (e.g., BAMG, 2025) demonstrate that observer bias is materially constrained in rural solid-biomass contexts due to the physical inelasticity of subsistence fuel collection, and to operationalize the mandate to accommodate the special circumstances of Least Developed Countries (LDCs) per the mechanism's Rules, Modalities and Procedures (Paragraph 33), the default parameter shall be contextually calibrated. For activities physically implemented in LDCs, or in contexts where the primary baseline fuel is gathered solid biomass, HEind shall equal 0.90 (a 10% conservative deduction). The Supervisory Body shall periodically review these default values based on emerging peer-reviewed paired-sensor studies."

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			Enforcing a severe default penalty where dMRV is physically or economically undeployable acts as a regressive infrastructure tax. This directly conflicts with the Rules, modalities and procedures for the mechanism established by Article 6, paragraph 4, of the Paris Agreement (RMPs), specifically the mandates to "encourage broad participation" (RMP Paragraph 31(b)) and to ensure that the mechanism accommodates the special circumstances of LDCs (RMP Paragraph 33), as well as Article 4.6 of the Paris Agreement.	

5	DEMONSTRATION OF ADDITIONALITY	Section: 6.1. Regulatory analysis Paragraph/Table/Figure No.: Paragraph 27(b)(ii)	Harmonizing the Regulatory Surplus analysis with Paris Agreement Article 9 (Blended Finance), avoiding perverse policy disincentives in LDCs, and aligning with A6.4-STAN-METH-003. Paragraph 27(b)(ii) requires confirmation that "Public sector finance is not providing a subsidy for the adoption of efficient cookstoves" to demonstrate additionality. We fully support the MEP's core intent: the Article 6.4 mechanism must not issue credits for interventions that are entirely funded by public entities, as this would violate the principle of Regulatory Surplus and double-claim public achievements. However, phrasing this requirement as an absolute, unquantified prohibition inadvertently outlaws "Blended Finance." Development economics and energy access literature (e.g., World Bank, 2020; IEA, 2023) consistently demonstrate that in extreme poverty contexts, carbon revenue alone is rarely sufficient to cover the full spectrum of hardware manufacturing, last-mile distribution logistics, and rigorous MRV compliance. Clean energy transitions in LDCs structurally require a "capital stack"—for instance, a host government providing a partial transport grant or VAT exemption, with the private carbon market providing the remaining Viability Gap Funding. Under the current absolute wording of Paragraph 27(b)(ii), if a host country government introduces a minor fiscal incentive or partial public co-financing to alleviate severe energy poverty, the activity is immediately disqualified from the mechanism. This creates a perverse disincentive against host country policy ambition, forcing a false binary between domestic public policy and international carbon markets, which contradicts the climate finance mobilization principles envisioned in Article 9 of the Paris Agreement. Furthermore, this blanket exclusion bypasses the established safeguards of the overarching Standard: Demonstration of additionality in mechanism methodologies (A6.4-STAN-METH-003). The Additionality Standard already provides robust mechanisms (e.g., Investment Analysis and Barrier Analysis) to rigorously assess whether an activity requires mechanism revenues to become financially	Refine the language to explicitly differentiate between fully funded public mandates (which render an activity non-additional) and partial public co-financing (blended finance). Ensure that where partial subsidies exist, the activity may remain eligible provided it demonstrates financial additionality in accordance with established PACM standards. Proposed text revision for Paragraph 27(b)(ii): "(ii) Public sector finance is not providing a comprehensive subsidy (defined as a subsidy or grant that fully covers the combined capital, distribution, and operational costs of the appliance) for the adoption of efficient cookstoves or cooking fuels or energy sources cleaner... than fuelwood or artisanal charcoal in the geographic boundary of the Article 6.4 activity. Where partial public sector finance, fiscal incentives (e.g., tax or import duty exemptions), or Official Development Assistance (ODA) are provided (i.e., Blended Finance), the activity shall not be automatically disqualified. Instead, the activity participants shall demonstrate, in accordance with the overarching Standard: Demonstration of additionality in mechanism methodologies (A6.4-STAN-METH-003), that the partial public subsidy is insufficient to deploy the technology autonomously at scale, and that the Article 6.4 mechanism revenue remains an essential financial instrument to overcome the remaining economic or operational barriers."

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			viable, inclusive of any partial subsidies or fiscal incentives.	

6	LEAKAGE	Section: 9. Leakage Paragraph/Table/Figure No.: Paragraph 98 & Equation (32)	Aligning embodied leakage emissions (ELE) with Life Cycle Assessment (LCA) science and promoting endogenous capacity building (Paris Agreement Article 11). Paragraph 98 establishes a mandatory leakage deduction for the materials, manufacture, and transport of project cookstoves, setting the embodied emission factor (ELE) at a default of 0.0068tCO2eq per unit. As detailed in the methodology's explanatory notes (Appendix 7, Paragraph 33), this default was derived using emission factors from the World Steel Association and the Global Logistics Emissions Council. While this default provides an accurate and scientifically rigorous proxy for industrially manufactured appliances—such as metal-bodied stoves requiring smelting, international supply chains, and ocean freight—applying this global industrial emission factor universally to all cookstove types constitutes a structural inaccuracy. In many Least Developed Countries (LDCs), highly effective and culturally adapted clean cooking interventions rely on artisanal, built-in-place cookstoves constructed by local cooperatives using unbaked, hyper-local earthen materials (e.g., clay, mud, agricultural residues). Published Life Cycle Assessments (LCAs), including literature referenced by the MEP (Wilson et al., 2016), clearly demonstrate that the embodied manufacturing and transport emissions of such locally sourced, non-metallic earthen stoves are functionally negligible compared to their industrial counterparts. Applying an industrial steel-and-shipping carbon proxy to a locally sourced earthen stove violates the principles of Accuracy and Relevance as defined in the overarching Standard: Setting the baseline in mechanism methodologies (A6.4-STAN-METH-004, Paragraphs 8(a) and 8(h)), which require that bias be minimized and misleading parameters be avoided. Furthermore, penalizing a locally built, ultra-low-carbon stove with a global industrial carbon tax creates a perverse market disincentive. It mathematically disadvantages the most localized, circular-economy manufacturing methods available, conflicting with the mandate to foster endogenous capacity-building in developing countries (Article 11 of the Paris Agreement).	Differentiate the ELE default factor based on the fundamental material composition and origin of the cookstove, exempting locally constructed artisanal/earthen stoves from industrial steel leakage penalties to preserve scientific accuracy and support local supply chains. Proposed text revision for Paragraph 98: "98. The leakage assessment concludes that no negative leakage emissions are likely attributable to the Article 6.4 activity, apart from emissions associated with materials, manufacture, and transport of the project cookstoves. To ensure scientific accuracy and operationalize Article 11 of the Paris Agreement regarding endogenous capacity building, the default leakage factor (ELE) shall be differentiated by technology type: (a) For industrially manufactured cookstoves, imported appliances, or stoves constructed predominantly of refined metals (e.g., steel, aluminum), leakage is estimated using the default value of 0.0068tCO2eq per cookstove or established based on verified study. (b) For artisanal, built-in-place, or domestically constructed cookstoves manufactured predominantly (>75% by mass) from locally sourced, non-industrial earthen materials (e.g., unbaked clay, mud, brick) where transport distances are minimal, embodied emissions are demonstrably negligible. For these specific technologies, ELE shall be set to 0.000 tCO2eq per cookstove."

7	EMISSION REDUCTIONS	Section: 11. Emission reductions Paragraph/Table/Figure No.: Paragraph 105	Aligning uncertainty quantification with A6.4-STAN-METH-004 flexibility, preventing "stacked conservatism," and providing a deterministic compliance alternative to foster endogenous MRV capacity (Paris Agreement Article 11). Paragraph 105 currently mandates that activity participants conduct an uncertainty analysis using error propagation or Monte Carlo simulations following Volume 1, Chapter 3 of the IPCC 2019 Refinement, to ensure emission reductions are not overestimated at a 90% or 95% confidence level. While stochastic modeling (such as Monte Carlo simulations) is highly appropriate for macro-level National GHG Inventories or centralized industrial point-sources, imposing it as the sole compliance pathway for decentralized, micro-scale household activities creates a severe technological and financial bottleneck in Least Developed Countries (LDCs). Imposing this requirement functionally necessitates the outsourcing of Measurement, Reporting, and Verification (MRV) to international statistical consultancies, undermining the mandate to foster endogenous institutional capacity-building in developing host countries (Article 11 of the Paris Agreement). Furthermore, mandating stochastic simulations strictly limits the methodological flexibility explicitly granted by the overarching Standard: Setting the baseline in mechanism methodologies (A6.4-STAN-METH-004). Paragraph 15 of that Standard confirms that "Different approaches may be pursued to address uncertainty," noting that uncertainty can be managed conservatively through scenario or parameter selection rather than strictly through error propagation formulas. The clean energy sector—including established UNFCCC sampling frameworks—standardly utilizes the deterministic 90/10 Confidence/Precision rule for empirical field sampling. Utilizing deterministic Confidence Interval (CI) bounding rigorously satisfies the overarching A6.4-STAN-METH-004 (Appendix 1, Paragraph 13) requirement that "conservativeness... shall be based on the level of uncertainty (e.g., applying a larger deduction in case of higher uncertainties)." If an empirically sampled parameter fails to meet the strict 90/10	Provide the deterministic 90/10 statistical bounding rule as a capability-appropriate, deemed-compliance alternative to complex stochastic modeling for decentralized projects. Explicitly exempt structurally capped parameters from probabilistic variation. Proposed text revision for Paragraph 105: "105. The activity participants shall conduct an uncertainty analysis following the guidance from Volume 1, Chapter 3 of the IPCC 2019 Refinement through the error propagation method or the Monte Carlo simulation. Alternatively, to accommodate the institutional capabilities of host countries and foster endogenous capacity building, activity participants may utilize deterministic Confidence Interval (CI) bounding for empirically sampled parameters. Under this approach, if parameters (e.g., KPTs, Usage Surveys) meet the 90/10 confidence/precision guidelines stipulated in the applicable sampling and surveys tool, measurement uncertainty is deemed conservatively managed. If the target precision is not achieved, the activity participant shall automatically apply the conservative bound of the confidence interval (e.g., the lower bound of the CI for baseline parameters, and the upper bound for activity emissions). The application of this deterministic statistical safeguard fully satisfies the requirement that the emission reductions in equation (34) shall be determined with a [95%] [90%] confidence level that they are not overestimated. Furthermore, to prevent the mathematical double-counting of uncertainty ('stacked conservatism'), any parameter that has been mathematically overridden by a deterministic methodological cap or default (e.g., the Ambitious Benchmark baseline efficiency, HEind defaults, or maximum usage caps) shall be treated as a fixed constant and explicitly exempt from probabilistic variation."

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			target, applying the conservative bound of the confidence interval (the Lower Bound for baseline parameters, and the Upper Bound for activity emissions) achieves the exact mathematical objective required by Paragraph 105: ensuring with high confidence that emission reductions are not overestimated. Providing this deterministic, capability-appropriate alternative ensures that local stakeholders can execute, audit, and verify the calculations transparently. Finally, subjecting parameters that are already constrained by absolute methodological rules (e.g., the 75% survey usage cap, the Ambitious Benchmark efficiency limit, or the default HEind penalty) to further probabilistic variation constitutes "stacked conservatism." From a statistical perspective, applying a probability distribution to a parameter already truncated by a regulatory cap mathematically double-penalizes the activity for the same variance.	

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8	COVER NOTE	Response to 58(a): Approaches to demonstrate low-income or poverty levels. Section: 4. Applicability (Addressing MEP Request 58a: Approaches to demonstrate poverty levels) Paragraph/Table/Figure No.: Paragraphs 11(c) and 13(e)	Resolving the regulatory inconsistency between geographic limits and socio-economic proxies to prevent the exclusion of informal urban settlements. Paragraph 58(a) seeks input on approaches to demonstrate low-income levels to ensure the appropriateness of baseline elements. Currently, the methodology enforces a dual-filter: activities must be located exclusively in "rural areas" (Para 11c) AND must meet a low-income threshold such as the Multidimensional Poverty Index (MPI) ≥ 0.2 (Para 13d & e). Applying both a strict geographic boundary and a socio-economic proxy creates a severe regulatory redundancy with unintended exclusionary consequences. According to UN-Habitat (2022), over 230 million people in Sub-Saharan Africa reside in informal urban and peri-urban settlements (slums). Peer-reviewed energy literature confirms that these peri-urban populations rely almost entirely on gathered fuelwood and artisanal charcoal, facing extreme poverty, capital destitution, and indoor air pollution identical to their rural counterparts. Because the poverty proxy (MPI or income) already mathematically secures the additionality and socio-economic integrity of the target population, the "rural-only" label acts as an arbitrary administrative barrier, inadvertently redlining the urban extreme poor from climate finance simply due to municipal zoning classifications. Furthermore, conducting bespoke household income surveys in informal, largely non-monetized economies imposes a prohibitive evidentiary burden. To operationalize Article 4.6 of the Paris Agreement, UN-designated Least Developed Country (LDC) status should serve as a globally recognized, deemed proxy for poverty, aligning with standardized practices in other UNFCCC mechanisms.	Remove the "rural-only" restriction for populations that demonstrably meet the poverty threshold, and provide a deemed poverty compliance pathway for LDCs to reduce administrative bottlenecks. Proposed text revision for Paragraph 11(c) and 13(e): Revise 11(c): "Are implemented in rural areas, or in peri-urban and informal urban settlements where the target population is demonstrated to meet the poverty thresholds defined in paragraph 13(e)." Add [New Sub-Paragraph] 13(e)(iv): "Deemed Applicability: To operationalize Article 4.6 of the Paris Agreement and reduce administrative barriers in informal economies, activities physically implemented within host countries classified as Least Developed Countries (LDCs) by the United Nations are deemed to inherently satisfy the poverty/low-income applicability condition."

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9	COVER NOTE	Response to 58(b): Options for establishing the Ambitious Benchmark Section: 7.3.1. Procedure for the identification of the baseline scenario Paragraph/Table/Figure No.: Paragraphs 43–52	Prioritizing localized empirical baselines (Option 2) while protecting the he top 20th percentile calculation from non-market, subsidized outliers. Paragraph 58(b) seeks input on setting the ambitious benchmark via Option 1 (methodology level, fixed efficiency) or Option 2 (activity level, empirical top 20th percentile). We strongly support the adoption of Option 2 as the primary methodological pathway. Option 1 imposes a rigid global benchmark that paradoxically conflicts with Suppressed Demand (RMP Paragraph 33). In LDCs, forcing an aggregated global high-efficiency baseline models a technological leapfrog that the local population does not organically possess, artificially eroding the carbon value necessary to fund the intervention. Option 2 correctly allows the benchmark to reflect the actual socio-economic capacity of the localized community. However, a critical statistical safeguard must be added to Step 4. In deeply impoverished communities, the only highly efficient stoves present are frequently those distributed for free by NGOs, Official Development Assistance (ODA), or legacy carbon projects. Including externally subsidized, non-market appliances in the local "top 20%" calculation artificially skews the organic market baseline upward, violating the principle of calculating a true Business-As-Usual (BAU) counterfactual.	Adopt Option 2 as the primary methodology, introducing a strict exclusion criterion for non-market, subsidized technologies when calculating the top 20th percentile. Proposed text revision for Paragraph 50 (Option 2, Step 4): "Step 4. Prepare a performance distribution curve... When plotting this distribution, activity participants shall identify and statistically exclude technological outliers demonstrably distributed via full public subsidies, Official Development Assistance (ODA), or previously registered carbon crediting mechanisms. Identify the best performing comparable technologies as those units within the top 20th percentile of the remaining, organically procured appliance stock."

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10	COVER NOTE	Response to 58(c): Threshold for "User Household" Section: 8.2.3. Defining user households (Addressing MEP Request 58c: Threshold for "user household") Paragraph/Table/Figure No.: Paragraph 38	Validating the "once per week" threshold based on the comprehensive measurement principles of the Kitchen Performance Test (KPT).Paragraph 58(c) seeks input on whether defining a "user household" as one using the project cookstove at least "once per week" is sufficient to reduce uncertainties in project emissions quantification. This threshold is highly appropriate and mathematically robust. The rationale rests on the rigorous design of the Activity Kitchen Performance Test (P-KPT). Paragraph 90 explicitly requires the P-KPT to measure the "use of all fuel types by all cooking devices... in the activity household." Consequently, the P-KPT mathematically internalizes the emissions of non-use and stove stacking. If a household uses the project stove only once a week and relies heavily on a highly polluting traditional fire for the remaining meals, those heavy baseline emissions are physically captured during the KPT and mathematically reduce the project's net emission reductions. Therefore, the "once per week" rule does not inflate emission reductions; it simply serves as a binary filter to determine the active cohort size. Raising this threshold would needlessly exclude vulnerable households making progressive (albeit slow) energy transitions, without improving atmospheric integrity.	Affirm the proposed threshold and explicitly justify it based on comprehensive KPT measurement. Proposed text addition to Paragraph 38: "Because the activity Kitchen Performance Tests (KPTs) comprehensively measure total household fuel consumption across all devices—thereby strictly internalizing the emissions from partial usage and stove stacking—the threshold of at least one use per week is deemed a sufficient and robust metric to define an active user household without risking the overestimation of emission reductions."

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11	COVER NOTE	Response to 58(d): Survey-only monitoring vs. Direct measurements Section: 8.2.3. Adjustment for the potential impact of the Hawthorne effect Paragraph/Table/Figure No.: Paragraphs 63 and 96 Comment No.: 04	Preserving the survey-plus-cap option to ensure deployability in off-grid LDC economies (Article 4.6) while contextually adapting customer support metrics. Paragraph 58(d) seeks input on whether to allow manual surveys combined with conservative usage caps (e.g., 75% or 90% caps), or to mandate continuous Stove Use Monitors (SUMs) for all activities. We strongly urge the MEP to retain the survey-plus-cap option (Option 1). Mandating digital IoT telemetry (SUMs) across all activities would act as a severe technological barrier to entry for clean cooking projects in deep-rural LDC economies. Off-grid hardware deployments suffer catastrophic attrition rates due to extreme heat, dust, battery degradation, and cellular retrieval bottlenecks (Thomas et al., 2021). The caps in Option 1 provide a vital "safe harbor," allowing developers in infrastructure-poor regions to accept a highly conservative, deterministic reduction in their carbon yield in exchange for utilizing analog, survey-based MRV that is actually deployable in their host countries. However, the requirement to provide a "toll-free communications channel" to unlock the 90% usage cap (Paragraph 63) assumes Western corporate telecommunications infrastructure. To operationalize Common But Differentiated Responsibilities (CBDR), this metric shall be adapted for informal, off-grid economies where centralized call centers are unfeasible.	Retain Option 1 (Surveys with caps) to preserve LDC market access, but adapt the customer support metrics to off-grid realities. Proposed text revision for Paragraph 63(b): "(b) Household participants must be able to contact the activity proponent to access support (e.g., maintenance and repair services) through a commonly used, toll-free communications channel. In rural, peri-urban, or off-grid areas within LDCs where telecommunications infrastructure is unreliable or unfeasible, the provision of designated, localized community agents, trained village health/energy workers, or scheduled periodic maintenance visits shall be deemed fully equivalent to a 'toll-free communications channel' for the purpose of achieving this cap."

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12	BASELINE SCENARIO	Section: 7.3.1 & 7.6. Identification of the baseline scenario Paragraph/Table/Figure No.: Tables 3 and 4; Paragraphs 66 and 82	Resolving a mathematical "Catch-22" where the Conservative BAU baseline is artificially more stringent than the Ambitious Benchmark, creating an impossible validation condition in Year 1. There is a structural mathematical inconsistency between Table 3 and Table 4. The Ambitious Benchmark for fuelwood (Table 3) establishes a baseline energy consumption of 0.0066 TJ/(person x year). However, the Conservative BAU baseline (Table 4) applies an uncertainty upper-bound to traditional stoves, resulting in a baseline energy consumption of 0.0064 TJ/(person x year). Because the "Business-As-Usual" energy consumption is mathematically lower than the "Ambitious" benchmark, Paragraph 82 will legally force all activities to "return to Step 3 and revise the quantitative methods... to ensure that the downward adjusted baseline is lower than the conservative BAU." However, Paragraph 66 explicitly forbids any downward adjustment from being applied in the first calendar year of the crediting period. Consequently, developers are mandated to lower their Year 1 baseline, but prohibited from doing so.	Cap the uncertainty upper-bound of the BAU efficiency so it does not inadvertently exceed the Ambitious Benchmark. Proposed text revision for Table 4: Revise Table 4 BAU description for Fuelwood: "The energy for cooking of 0.001095 TJ... would be provided at the BAU efficiency of 11.8% ± 5.3%. To maintain logical hierarchy, the applied conservative BAU efficiency upper-bound shall be capped such that it does not exceed the Ambitious Benchmark efficiency." (Apply identical capping logic to Charcoal).

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13	ACTIVITY SCENARIO	Section: 8.2.2. Project emissions prior to Hawthorne effect adjustment Paragraph/Table/Figure No.: Paragraphs 91 and 92	Resolving a mathematical clawback that structurally nullifies Suppressed Demand (RMP Paragraph 33) for ultra-poor demographics. Paragraph 44 correctly operationalizes Suppressed Demand by establishing a normative Minimum Service Level energy floor (0.001095 TJ/person/year) to ensure impoverished households are not penalized for historical energy deprivation. However, Paragraphs 91 and 92 mandate that if the actual useful energy measured during the Activity Kitchen Performance Test (KPT) is lower than this threshold, the baseline must be pro-rated (shrunk) downwards to match the actual KPT useful energy. This creates a mathematical contradictions that completely neutralizes the concept of Suppressed Demand. By definition, populations experiencing Suppressed Demand lack the economic resources to meet their basic daily energy needs. Providing a highly efficient cookstove removes the thermal inefficiency barrier, but it does not instantly remove food insecurity. Extremely poor households will likely still record useful energy levels below the 0.001095 TJ threshold during an Activity KPT simply because they cannot afford sufficient food to cook. Forcing the baseline to be pro-rated downward to match this observed poverty explicitly violates the mandate of RMP Paragraph 33, punishing the project for operating in deeply impoverished demographics. Furthermore, pro-rating the baseline downwards inadvertently penalizes households that organically adopt ultra-efficient cooking behaviors (e.g., reducing wasted simmering time).	Remove Paragraphs 91 and 92 to preserve the integrity of the Suppressed Demand baseline floor. Proposed text revision: "Delete Paragraph 91 and Paragraph 92 in their entirety. The baseline useful energy demand (0.001095 TJ/person/year) must remain a fixed normative floor to appropriately operationalize Suppressed Demand, independent of the constrained useful energy empirically observed in impoverished activity households."

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14	BASELINE SCENARIO	Section: Downward adjusted baseline emissions in subsequent years Paragraph/Table/Figure No.: Equations (13) and (14)	Correcting a mathematical error in the Downward Adjustment volume calculation that artificially amplifies baseline deductions for fluctuating cohorts, potentially generating negative baselines. Equations (13) and (14) operationalize the 1% annual Downward Adjustment Factor (DAF) by subtracting a percentage of the maximum total absolute baseline energy consumption volume (max(ECBL,i,y, ECBL,i,y1)). Applying a percentage deduction derived from a historical peak absolute volume creates a mathematical error for any activity where the cohort size (the number of operational cookstoves) naturally drops off over the crediting period. Because Total Energy Consumption (EC) scales directly with the number of user households, a project that deploys 10,000 stoves in Year 1 will generate a massive ECy1. If, by Year 5, natural equipment attrition reduces the active cohort to 1,000 stoves, the current unadjusted baseline (ECy5) correctly shrinks by 90%. However, because Equation (13) utilizes the MAX() function, the Year 5 DAF deduction (4%) is calculated against the 10,000-stove peak volume of Year 1, and subtracted from the much smaller 1,000-stove volume of Year 5. In this highly common scenario, the formula forces the surviving stoves to bear the penalty of the inactive stoves, mathematically yielding a catastrophic collapse in crediting or even negative baseline energy consumptions. To accurately apply a 1% annual ambition deduction without mathematically penalizing natural cohort attrition, the DAF must be applied directly as a percentage multiplier to the unit-level benchmark parameter (BMBL), not the aggregated absolute volume.	Revise Equations (13) and (14) to apply the Downward Adjustment as a direct percentage multiplier against the unit-level benchmark, removing the absolute volume subtraction and MAX() function. Proposed text revision: "Replace Equations (13) and (14) with the following unit-level adjustments: To determine the downward-adjusted energy consumption (ECBL,i,adj,y), activity participants shall apply the annual 1% adjustment directly to the per-capita benchmark prior to calculating the aggregate volume: $⟦BM⟧_{BL,i,adj,y}=⟦BM⟧_{BL,i,y}×[1-(0.01×(y-y_i))]$ This adjusted unit benchmark ($⟦BM⟧_{BL,i,adj,y}$) shall then be substituted into Equation (6) to calculate ECBL,i,adj,y, ensuring the absolute volume of the downward adjustment naturally and accurately scales with the actual active cohort size for the monitoring period."

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15	EMISSION REDUCTIONS	Section: 11. Emission reductions & 8.2.3 Hawthorne effect Paragraph/Table/Figure No.: Equations (30) and (34), Paragraphs 82, 94, and 103	Correcting structural equation errors to resolve undefined variables and ensure the final Emission Reduction calculation complies with the Business-As-Usual (BAU) cap. Section 7.7 (Paragraph 82) correctly establishes that the final crediting baseline must be the lower value between the downward adjusted baseline (BEadj,y) and the conservative BAU baseline (BAUcons,y). However, the final overarching emission reduction calculation in Equation (34) explicitly hardcodes the downward adjusted baseline (BEadj,y) into the formula. Because it does not incorporate the result of the Paragraph 82 comparison, calculating emission reductions strictly according to Equation (34) systematically bypasses the BAU cap. Furthermore, Equation (30) relies on a parameter labeled BEfinal,y. This variable is completely undefined in the preceding methodology text.	Formally define a variable representing the outcome of the baseline comparison step, and explicitly substitute this variable into the final calculations to close the algebraic loop. Proposed text revision: Please apply the following structural corrections to the methodology text to ensure algebraic consistency: 1. In Paragraph 82: Explicitly define a new parameter (e.g., 'Selected Crediting Baseline' or BEcrediting,y) that mathematically represents the lower value resulting from the comparison between BEadj,y and BAUcons,y. 2. In Paragraph 94 (Equation 30 & 'Where' definitions): Replace the currently undefined variable BEfinal,y with this newly defined BEcrediting,y parameter. 3. In Paragraph 103 (Equation 34 & 'Where' definitions): Replace the hardcoded BEadj,y parameter with the newly defined BEcrediting,y parameter to ensure the final emission reduction calculation legally enforces the BAU cap rule established in Paragraph 82.

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16	EMISSION REDUCTIONS	Paragraph/Table/Figure No.: Paragraph 105 (and associated MEP Note on Page 48)	The MEP note on Page 48 specifically requests feedback on the assumptions listed in Paragraph 105, which exempt certain default parameters (e.g., Default useful cooking energy, NCV of wood, emission factors, and estimated leakage) from the uncertainty analysis because they are "already deemed to be conservative." Furthermore, the MEP asks if this approach complies with Paragraph 13 of the appendix to the Baseline Standard (A6.4-STAN-METH-004). We support the MEP's proposal to exempt these parameters from probabilistic variation, and this exemption is strictly necessary to comply with the Baseline Standard. Paragraph 13 of A6.4-STAN-METH-004 requires that the implementation of conservativeness "shall be based on the level of uncertainty (e.g., applying a larger deduction in case of higher uncertainties)." Explicitly exempting these conservative defaults is the only mathematically sound way to satisfy the Baseline Standard. (Note: Our previous Comment 10 regarding deterministic 90/10 bounding provides the "other approach" requested by the MEP).	The MEP note on Page 48 specifically requests feedback on the assumptions listed in Paragraph 105, which exempt certain default parameters (e.g., Default useful cooking energy, NCV of wood, emission factors, and estimated leakage) from the uncertainty analysis because they are "already deemed to be conservative." Furthermore, the MEP asks if this approach complies with Paragraph 13 of the appendix to the Baseline Standard (A6.4-STAN-METH-004). We support the MEP's proposal to exempt these parameters from probabilistic variation, and this exemption is strictly necessary to comply with the Baseline Standard. Paragraph 13 of A6.4-STAN-METH-004 requires that the implementation of conservativeness "shall be based on the level of uncertainty (e.g., applying a larger deduction in case of higher uncertainties)." Explicitly exempting these conservative defaults is the only mathematically sound way to satisfy the Baseline Standard. (Note: Our previous Comment 10 regarding deterministic 90/10 bounding provides the "other approach" requested by the MEP).
17	COVER NOTE	-	We strongly support changing the terminology to "pre-activity situation." A "scenario" refers to a hypothetical, forward-looking projection or modeled counterfactual (e.g., the Baseline Scenario includes the Ambitious Benchmark, Suppressed Demand adjustments, and the Downward Adjustment Factor). Conversely, the conditions assessed during the pre-activity survey at Day 0 represent actual, empirically measured, and verifiable physical realities existing at a specific point in time (e.g., observed stove types, household sizes). Defining this as a "situation" provides critical semantic clarity, cleanly separating the empirically observed field data (the pre-activity situation) from the mathematical counterfactual used for crediting (the baseline scenario).	We strongly support changing the terminology to "pre-activity situation." A "scenario" refers to a hypothetical, forward-looking projection or modeled counterfactual (e.g., the Baseline Scenario includes the Ambitious Benchmark, Suppressed Demand adjustments, and the Downward Adjustment Factor). Conversely, the conditions assessed during the pre-activity survey at Day 0 represent actual, empirically measured, and verifiable physical realities existing at a specific point in time (e.g., observed stove types, household sizes). Defining this as a "situation" provides critical semantic clarity, cleanly separating the empirically observed field data (the pre-activity situation) from the mathematical counterfactual used for crediting (the baseline scenario).

18	APPENDIX 7	References included in the text	— Bailis, R., Drigo, R., Ghilardi, A., & Masera, O. (2015). The carbon footprint of traditional woodfuels. Nature Climate Change, 5(3), 266-272. — Bensch, G., & Peters, J. (2015). The intensive margin of technology adoption – Experimental evidence on improved cooking stoves in rural Senegal. Journal of Health Economics, 42, 44-63. — Berkeley Air Monitoring Group (BAMG). (2025). Research Brief: Biomass Energy Initiative for Africa: Hawthorne Effect Investigation. [As cited in A6.4-MEP013-A02 Explanatory Notes]. — Dickinson, K. L., Bailis, R., Bofinger, J., & Pattanayak, S. K. (2013). Adoption and use of improved cookstoves in rural India. Energy Policy, 51, 624-632. — Energy Sector Management Assistance Program (ESMAP). (2020). The State of Access to Modern Energy Cooking Services. Washington, DC: World Bank. — Gold Standard for the Global Goals. (2026). Simplified Methodology for Clean and Efficient Cookstoves (GS4GG PAA M400-07, Version 4.0). The Gold Standard Foundation. — Intergovernmental Panel on Climate Change (IPCC). (2019). 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 1: General Guidance and Reporting. IPCC, Geneva, Switzerland. — International Energy Agency (IEA). (2023). A Vision for Clean Cooking Access for All. IEA, Paris. — Lombardi, F., Riva, F., Bonamini, G., et al. (2022). Monitoring the adoption of clean cooking technologies in developing countries. Energy for Sustainable Development, 68, 303-317. — Thomas, E. A., Wilson, D. L., Barstow, C. K., & Rosa, L. (2021). Sensor-based monitoring of cookstove use: A review of state-of-the-art technologies and field applications. Renewable and Sustainable Energy Reviews, 141, 110825. — UN-Habitat. (2022). World Cities Report 2022: Envisaging the Future of Cities. United Nations Human Settlements Programme. Nairobi, Kenya. — UNFCCC. (2015). The Paris Agreement. United Nations Framework Convention on Climate Change. — UNFCCC Article 6.4 Supervisory Body. (2024-2025). Standards: A6.4-STAN-METH-003, A6.4-STAN-METH-004, A6.4-STAN-METH-007. — Urban, J., Berger, J., Botha,	-

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			Y., Boafo-Mensah, G., et al. (2025). Quantifying the Efficiency and Fuel Consumption of Cooking with Traditional Wood and Charcoal Stoves in Malawi, Ghana, and Kenya. Environmental Science & Technology, 59(32), 16913-16922. — Wilson, D. L., Talancon, D. R., Winslow, R. L., Linares, X., & Gadgil, A. J. (2016). Avoided emissions of a fuel-efficient biomass cookstove dwarf embodied emissions. Development Engineering, 1, 45-52.	