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Name of submitter	Elisa Derby
Affiliated organization of submitter	Clean Cooking and Climate Consortium (4C)
Email of submitter	EDerby@cleancooking.org
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Document reference number and title: (Recommendation from the MEP to SBM020)
Draft mechanism methodology: Cooking energy transition

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	General	4C welcomes the publication of A6.4-MEP015-A01 – Draft Mechanism methodology: Cooking energy transitions (v.01.0) and appreciates the opportunity to provide inputs. 4C has prepared responses to MEP questions and notes, as well as other comments, and would like to underscore the urgency of three particularly sensitive issues for biomass projects: 1- Excluding applicability for projects where AMM-00X (the "Energy efficiency measures in household cooking" methodology)' s applicability conditions are met 2- Restricting biomass project applicability (in urban areas, above a proposed electrification rate threshold) 3- Considering all sources of uncertainty affecting the baseline to determine the initial downward adjustment (Option 1) 4C is very concerned about the impact any of these measures would have on clean cooking carbon project implementation and specifically the ability of biomass-using households to benefit from carbon finance's potential to scale access to clean cooking.	As elaborated in more detail in the individual responses below, 4C strongly recommends (1) allowing projects that meet applicability conditions for AMM-00X to also be eligible to use A6.4-MEP015-A01; (2) eliminating the proposed restrictions on biomass applicability, and (2) using Option 2 for the initial downward adjustment approach.

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2	4. Applicability	General, paragraph 11, and Question 1	4C supports the inclusion of gasifier stoves as an eligible Article 6.4 activity. 4C is not aware of any evidence showing that gasifiers have higher safety risks in households than other fuel-burning stoves, or that tar management is a significant problem. Further, many of the highest-performing advanced biomass stoves are also gasifiers, so excluding gasifiers from the methodology would also limit biomass project stove options to lower-performing technologies. 4C also recommends the inclusion of stoves that burn ethanol, pellets, and biogas, as well as LPG (see 4C's response to Question 2 below), as we intended for CLEAR to cover all common cooking transition scenarios in order to support harmonization and consistency across clean cooking carbon projects, rather than needing multiple methodologies for the multiple technology and fuel types. Given that no other A6.4 methodology currently exists that covers these fuel types, excluding ethanol, pellets, and biogas limits options that meet WHO clean for health criteria, which are critically needed in LMIC contexts, and also represent some of the best potential emission reductions technologies.	Retain gasifier stoves as an eligible technology, and consider also including ethanol, pellets, and biogas stoves.

3	4. Applicability	General and paragraph 11(d), and Question 2	4C supports the inclusion of LPG cookstoves as an eligible Article 6.4 activity. In many low-income countries and households, the substantial health benefits of transitioning away from polluting biomass cooking justify the use of LPG as an interim clean cooking fuel. Further, the climate benefits also justify this approach, given how polluting many unimproved biomass technologies are. A recent peer-reviewed study [1, 2] highlights the role of scaling LPG for cooking in mitigating global GHG emissions and lowering health risks. While renewable clean cooking solutions should remain the long-term objective, targeted support for transitional solutions such as LPG is needed where those alternatives are not yet available, reliable, affordable, or scalable. Finally, 4C intended for CLEAR to cover all common cooking transition scenarios in order to support harmonization and consistency across clean cooking carbon projects, rather than needing multiple methodologies for the multiple technology and fuel types. Regarding paragraph 11(d)(i), it will likely be difficult to determine whether the grid provides less than 12 hours of electricity per day across an Article 6.4 activity area. Such information is not likely to be widely available at the level of the target population, and the methodology does not specify the data source, measurement period, or duration that would be considered representative. If activity participants are expected to collect this information directly, additional guidance is needed on how reliability should be measured and over what period. Regarding paragraph 11(d)(ii), 4C recommends eliminating the proposed exclusion of households that have access to "reliable electricity." Reliable electricity access does not necessarily mean that electric cooking is a feasible or affordable option. Households may have reliable grid connections but face electricity tariffs, connection capacity constraints, appliance costs, or other barriers that make electric cooking economically inaccessible. Electricity costs also vary substantially between countries and electricity systems, including between grid and mini-grid supply. A household should therefore not necessarily be excluded from an LPG	Retain LPG as an eligible technology and revise paragraphs 11(d)(i) and (ii) so that they assess effective (reliable, technically adequate, and affordable) access to electric cooking. Also, clarify what is meant by "development of new LPG distribution infrastructure" in paragraph 11(d)(iv). 4C recommends distinguishing between major, long-lived LPG supply infrastructure and the distribution arrangements needed to deliver LPG to participating households.

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			activity solely because it has a reliable electricity connection. The relevant question for eligibility should be whether households have reliable, technically adequate, and affordable access to electricity for cooking, rather than whether they have electricity access in general. Regarding paragraph 11(d)(iv), 4C recommends clarifying what is meant by "development of new LPG distribution infrastructure." It is unclear which types or scales of infrastructure would make an activity ineligible. For example, an LPG activity may need to establish new delivery routes, engage additional distributors or retailers, create local cylinder distribution or refill arrangements, or otherwise expand last-mile delivery in order to serve participating households. It is not clear whether these activities would be considered development of "new LPG distribution infrastructure." [1] Floess, E., Grieshop, A., Puzzolo, E., Pope, D., Leach, N., Smith, C. J., Gill-Wiehl, A., Landesman, K., & Bailis, R. (2023). Scaling up gas and electric cooking in low- and middle-income countries: climate threat or mitigation strategy with co-benefits? Environmental Research Letters, 18(2023), Article 034010. https://doi.org/10.1088/1748-9326/acb501 [2] Stockholm Environment Institute (2023). New research on the benefits of cleaner cooking: Q&A with Rob Bailis. Available at: https://www.sei.org/features/cleaner-cooking-qa-rob-bailis/	

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4	4. Applicability	General, paragraph 11(d), and Question 2	Regarding paragraph 11(d)(v), 4C recommends reconsidering or clarifying the condition that "the Activity proponent shall not be directly involved in LPG production or distribution networks." The reference to involvement in LPG distribution networks could be problematic for LPG activities in which the project proponent arranges or directly provides LPG delivery to participating households. This occurs in many CTEC LPG projects, where ensuring continued access to LPG and tracking household-level fuel consumption may be integral to the project design. A broad interpretation of paragraph 11(d)(v) could therefore render otherwise eligible activities ineligible simply because the project proponent participates in the last-mile distribution of LPG needed to serve project households. It is also unclear what level of involvement constitutes being "directly involved" in an LPG distribution network. For example, would the condition prohibit a project proponent from procuring LPG, contracting with distributors, delivering cylinders or refills to participating households, or selling LPG directly to enrolled households? If the purpose of this condition is to avoid Article 6.4 finance supporting the expansion of fossil-fuel production or major long-lived LPG infrastructure, 4C recommends targeting those activities directly rather than broadly excluding project proponents that participate in LPG distribution as part of implementing a clean cooking activity.	Retain LPG as an eligible technology and revise paragraphs 11(d)(i) and (ii) so that they assess effective (reliable, technically adequate, and affordable) access to electric cooking. Also, clarify what is meant by "development of new LPG distribution infrastructure" in paragraph 11(d)(iv). 4C recommends distinguishing between major, long-lived LPG supply infrastructure and the distribution arrangements needed to deliver LPG to participating households. Additionally, in paragraph 11(d)(v), define both "directly involved" and "LPG distribution networks" and distinguish between involvement in LPG production or major supply infrastructure and the project-level or LPG distribution activities necessary to supply participating households so that the latter are not excluded.

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5	6. Demonstration of additionality	37(g), Question 3	4C is not aware of any evidence that conclusively links the amount that a participant has paid for a stove (i.e., from nothing to full price) to the additionality of a project. We do not think it is the case that a project that gives cookstoves away for free is more likely to be additional than one that sells cookstoves to participants. Further, we think it is dangerous to create this incentive for projects to give away or heavily subsidize cookstoves in order to reduce their project set-up burden. Free cookstoves may distort a functioning market. It may also create a customer expectation of free cookstoves that the project may then struggle to meet as their revenue diminishes over the lifetime of the project.	4C recommends removing this paragraph and requirement entirely.
6	6. Demonstration of additionality	40(e), Question 4	4C is not aware of any evidence that conclusively links the amount that a participant has paid for a stove (i.e. from nothing to full price) to the additionality of a project. We do not think it is the case that a project that gives cookstoves away for free is more likely to be additional than one that sells cookstoves to participants. Further, we think it is dangerous to create this incentive for projects to give away or heavily subsidize cookstoves in order to reduce their project set-up burden. Free cookstoves may distort a functioning market. It may also create a customer expectation of free cookstoves that the project may then struggle to meet as their revenue diminishes over the lifetime of the project.	4C recommends removing this paragraph and requirement entirely.

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7	6. Demonstration of additionality	72	A common practice threshold of 30% reflects a reasonable bound for when a self-sustaining market for clean cooking technologies is likely to exist in LMICs. While a rule of thumb often identifies a 20% penetration rate as a tipping point for a self-sustaining market, the threshold is set higher for clean cooking due to weak distribution and knowledge networks connecting urban and rural areas and the relatively small middle-class consumer segment with disposable income in LMICs. While it is helpful to conduct common practice analysis within homogeneous areas (such as treating rural and urban areas separately), we do not see a justification for setting a different common practice thresholds for rural and urban areas.	4C recommends that a) X and b) Y should be set at 30%.
8	6. Demonstration of additionality	37(f) and 40(d)	These provisions implicitly require a common practice analysis. In combination with an extremely low de facto common practice threshold of 4.5%, these provisions essentially negate the value of the simplified additionality pathway. It seems the burden on the developer to prove that penetration of similar technologies in the target population is less than 4.5% would be the same as the burden imposed by 6.3.3. Further, the relevance of the reference to section 7.4.1 is unclear.	4C recommends that any common practice threshold for cookstoves be set at 30%, whether as part of a simplified or comprehensive approach. Given that the conditions that enable the simplified approach relate to the poverty of the target population, we fail to see the logic in having a different common practice threshold for these types of projects.

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9	6. Demonstration of additionality	72, 73(g) and 26	The wording in these paragraphs can lead to confusion of misinterpretations: Paragraph 72 says 'The common practice thresholds, F,', whereas this should be 'The common practice thresholds, Fmax ' or it should be 'The common practice thresholds of F' Paragraph 73 says 'Activity participants shall document the following as part of the common practice analysis: (g) The resulting values of Psim, Pall and the thresholds for F.' It is likely that the methodology means 'The resulting values of Psim, Pall and F.' The thresholds for F are defined on the methodology level; the value of F is calculated on the project level and needs to be documented. Paragraph 26 mentions 'Under this mechanism methodology, additionality shall be assessed and demonstrated from the perspective of the activity participants responsible for distributing project cookstoves'. It is unclear what this means in practice and what the consequences are, if any.	Clarify Paragraph 26, for proposed changes in Paragraph 72 and 73, see above.

10	7. Baseline scenario	Paragraph 90, Question 6	4C previously considered and applied geographic differentiation (i.e., Latin America vs the rest of the world) for baseline caps. The CLEAR methodology published for public comment in July 2024 included a cap on baseline energy consumption values for primary fuelwood users in Latin America of 0.035 TJ/capita/year (2.25 tons/capita/year of air-dried wood) and 0.0156 TJ/capita/year (1 ton/capita/year of air-dried wood) for the rest of the world. For baselines (in any region) where charcoal is the primary fuel, the cap was set at 0.0059 TJ/capita/year (0.2 tons/capita/year of charcoal). During public consultation, however, stakeholders raised concerns that "the rest of the world" (outside of Latin America) caps were too low, especially for Asia, which many suggested should have its own distinct cap, set at a value between the caps for Africa and Latin America. Some commenters noted that the baseline cap for Africa was below many current verified carbon project baselines. Some commenters proposed caps for each country. In response, 4C decided to remove the distinction between Latin America and non-Latin American countries in the revised CLEAR methodology and instead apply global caps for baseline energy consumption that are sufficiently high to accommodate regions with higher baseline fuel consumption, such as certain areas in Latin America. The flags serve the important purpose of creating a mechanism for having to justify the higher values (i.e., documenting that the project is in Latin America and high wood-consuming plancha stoves are common as a baseline technology). As such, the flags are an important and prescriptive way to require justification for higher values under the cap, and 4C recommends retaining them. This revised approach avoids creating broad regional categories that may not adequately reflect substantial variations in fuel consumption patterns both between and within regions and countries. Early on, 4C briefly considered other approaches to differentiating baseline use cases. We have not analyzed the existing KPT data to confirm whether it supports a clear and replicable difference between rural and urban contexts. One challenge with doing so	Do not disaggregate the cap values on a geographical basis. Also, do not organize the caps by rural versus urban/peri-urban user groups. Instead, apply the CLEAR global caps and flags for baseline energy consumption. For clarity, please also specify whether the cap and flag values refer to oven dry or air-dry fuelwood.

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			would be categorizing each location appropriately, as the distinction between urban and non-urban settings is often not binary in practice. Many households targeted by clean cooking activities live in peri-urban, rapidly urbanizing, or transitional areas that fall along a continuum between what might conventionally be considered rural and urban contexts. These areas can exhibit characteristics of both, and many cookstove activities operate in these settings. A binary administrative designation may therefore poorly reflect actual conditions on the ground and could result in otherwise comparable households or activities being treated differently under the methodology solely because of how their location has been administratively classified.	

11	7. Baseline scenario	Paragraph 82, Note 1	4C does not recommend establishing a mandatory hierarchy between the two CTEC methods. It would not be appropriate to describe either method as universally more accurate. As described below, each approach has its own strengths and weaknesses, and accuracy depends largely on how well it is implemented. The selection of a representative standardized meal for the CCT approach and appropriate sampling for the KPT approach is particularly important. Back-calculation approach CCTs, which are needed for the back-calculation approach, are less expensive and operationally simpler than running a KPT campaign; do not require field measurements in households; are implemented in a controlled location using local cooks; avoid some of the sampling and seasonal variability issues associated with KPTs; and measure performance under cooking conditions that are more realistic than laboratory or water-boiling tests (WBTs). However, CCT results heavily depend on selecting a genuinely representative standardized meal; and provide only a snapshot of cooking behavior based on a single meal, which, if poorly selected, could favor the project stove or fail to represent important local cooking tasks. It is important to recognize that, although a methodology can establish requirements and guidance, it cannot fully control meal selection or CCT implementation. The quality of implementation will continue to depend on project proponents and VVBs, who need to understand the guidance and thoroughly check that it has been followed. Emissions quotient/KPTs CTEC approach KPTs, which are required under the emissions quotient CTEC approach, measure actual total household fuel consumption under normal conditions; capture different meals, cooking tasks, stove stacking, and household behavior; do not depend on selecting one standardized meal; and may provide a more representative picture of real-world cooking across the sampled population. However, KPTs are substantially more expensive, labor-intensive, and time-consuming than CCTs. They rely on an appropriately selected and sufficiently large household sample, may be affected by seasonal	4C does not recommend establishing a mandatory hierarchy between the two CTEC methods. One reason 4C included both the KPT and back-calculation options in the CLEAR methodology was to incentivize and facilitate the use of the CTEC pathway rather than the non-CTEC pathway, while allowing project proponents to select the option most appropriate for their circumstances. Despite the limitations described above, 4C considers both CTEC approaches to be more robust than the non-CTEC approaches. Requiring the KPT approach in all cases could impose substantial cost and logistical barriers and discourage projects from using the CTEC pathway. Requiring the back-calculation approach could limit the emissions reductions potential of the project, and also discourage projects from using the CTEC pathway. The suitability of each approach is more likely to depend on the project context. Project proponents should therefore be permitted to select either approach, provided that they meet all applicable testing, sampling, and monitoring requirements. The CCT approach may be more suitable where: field data collection is constrained by such factors as weather, topography, or violence; there are significant seasonal differences in the fuel supply; or research capacity for conducting KPTs is constrained or lacking. The KPT approach may be more suitable where: cooking practices and food choices vary significantly in the project population; participant homes are easily accessible and trained enumerators are available. The methodology should also strengthen the safeguards applicable to each method rather than rank one above the other. In particular, the CCT requirements should include clear and consistent provisions concerning the minimum number of cooks and tests, and representativeness of meal selection. This is detailed in a separate 4C comment below.

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			variation, and impose a greater burden on participating households. In some contexts, they may also be challenging or even dangerous to implement. KPT results may also exhibit greater variability because they reflect diverse real-world household behavior. When appropriately addressed through sampling requirements, however, this variability may be a strength, as it may provide a more representative picture of actual cooking practices than a single standardized meal.	

12	7. Baseline scenario	Note 2	The methodology proposes two options for determining the uncertainty of baseline emissions for the purpose of the first-year downward adjustment: Option 1, which quantifies the uncertainty of net baseline emissions across all contributing parameters, including fNRB, baseline energy consumption, and emission factors; and Option 2, which limits the uncertainty of baseline energy consumption alone. ***We strongly recommend Option 2. We are concerned that Option 1 could result in an initial downward adjustment that is both duplicative and so high that it will make biomass projects effectively impossible to implement.*** Downward adjustments generally serve two distinct purposes: (1) addressing uncertainty in the baseline estimate, and (2) increasing ambition over time (paragraph 62). These are separate mechanisms and should not be conflated. On uncertainty specifically, the proposed methodology already states that uncertainty is addressed through multiple layered provisions, including the use of conservative default emission factors and other standardized parameters, conservative calculations of baseline energy consumption, and the downward adjustment itself. The fNRB parameter in this methodology is one such standardized, conservatively-set default parameter. As the Baseline Standard mentions, standardization avoids the risk of selection bias in using project-specific approaches, which could lead to overestimation of baseline emissions. The fNRB uncertainty is therefore not project specific. A standardized default parameter, by design, should not be treated as a residual source of uncertainty requiring further stochastic quantification. Moreover, fNRB uncertainty is itself poorly characterized. A6.4-AMT-009 applies a 30% uncertainty assumption to fNRB. If this assumption is propagated through the Option 1 uncertainty assessment, it could disproportionately increase the estimated baseline uncertainty and therefore result in a substantially larger downward adjustment. We also note that estimating fNRB uncertainty at the activity level requires data (e.g., localized forest degradation or biomass regeneration rates) that is generally not available to individual	We strongly recommend Option 2. The uncertainty of the baseline energy consumption should be used for the determination of the initial downward adjustment.

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			activity participants and is properly the responsibility of the body setting the standardized default, not something that should be re-derived project by project. Requiring activity participants to independently quantify fNRB uncertainty for Monte Carlo purposes is disproportionate and duplicates work already performed in setting the default. We therefore recommend Option 2. The uncertainty of the baseline energy consumption should be used for the determination of the initial downward adjustment.	
13	7. Baseline scenario	143, 144	The proposed methodology states that the conservative BAU scenario "shall be deemed to be the same as the baseline scenario" and that as a consequence, conservative BAU emissions will always be higher than the downward-adjusted baseline emissions "except for the calendar year of the start date of the first crediting period," and on this basis applies a 0.99 discount factor to the year-one crediting baseline to force it below conservative BAU. We do not understand why this exception for the calendar year of the start date of the first crediting period exists. If the BAU scenario is identical to the baseline scenario, then the downward-adjusted baseline and the conservative BAU baseline should be equal or lower in every calendar year of the crediting period, including the first. No adjustment factor is needed at any point. Additionally, if there were a need for an adjustment factor, it is unclear why an adjustment factor of 0.99 would be appropriate. The paragraph itself is also confusing. It states that "Therefore, for that year, the crediting baseline determined in equation (27) shall be multiplied by a factor of 0.99 to ensure that it is lower than the conservative BAU emissions." However, equation (27) does not determine the crediting baseline. This paragraph needs clarifying.	We support the approach that 'the conservative BAU scenario for Article 6.4 activities eligible under this mechanism methodology shall be deemed to be the same as the baseline scenario', and that activity participants do not need to calculate or compare the conservative BAU emissions in subsequent years. However, we don't see any reason to adjust the crediting baseline in the first year with an adjustment factor of 0.99. We suggest removing this clause for the first year. If the MEP decides to keep it, we would like to understand how, and in which cases, the adjusted baseline can be higher than the conservative BAU in the first year of the start date of the first crediting period.

14	11. Emission reductions	Paragraph 187 and Note 3	4C recommends that uncertainty be addressed primarily through the conservative provisions built into the methodology rather than through a mandatory project-level uncertainty propagation analysis. The draft already includes multiple measures to address uncertainty and conservativeness, including conservative standardized parameters, 95/10 sampling requirements and conservative confidence bounds where those requirements are not achieved, and an uncertainty-based downward adjustment to baseline emissions. Requiring activity participants to conduct an additional Monte Carlo modelling exercise or error-propagation analysis on the final emission reductions risks incorrectly or double-counting uncertainty that has already been addressed elsewhere in the methodology. Paragraph 187 is also very open-ended, which could lead to inconsistent and error-prone application of uncertainty analysis. It requires consideration of "all sources of uncertainty," including uncertainty in assumptions, baseline scenarios, methods, and the representativeness of default values. Taken literally, this could extend well beyond project-level parameters to uncertainty in the fundamental scientific inputs underlying carbon accounting itself, including, for example, global warming potentials. Many of these sources of uncertainty cannot be objectively quantified by individual activity participants unless the methodology specifies the parameters to be included and provides appropriate uncertainty ranges, probability distributions, and treatment of correlations. Without such guidance, different activity participants and DOEs could make substantially different assumptions for the same parameters, undermining consistency and comparability across activities. In particular, standardized parameters such as fNRB should not require project-specific uncertainty estimates. As noted in our comment on the baseline downward adjustment, uncertainty associated with standardized defaults should be addressed when those defaults are established. Requiring individual activity participants to derive and propagate uncertainty estimates for these parameters would be technically challenging, error-	We recommend that the MEP demonstrate at the methodology level that the combined conservative provisions adequately ensure that emission reductions are not overestimated, rather than requiring every activity to conduct a separate project-level uncertainty propagation analysis.

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			prone, and likely impractical, while doing little to improve the conservativeness of the resulting emission reduction estimates. If the MEP considers residual uncertainty in standardized parameters to require propagation, it should establish the applicable uncertainty ranges, probability distributions, how to handle correlated variables, and other necessary inputs centrally rather than having each activity participant define them independently. This would reduce unnecessary analytical burden and help ensure consistent treatment across projects. If a project-level uncertainty analysis is required and emission reductions are adjusted accordingly, parameters whose uncertainty has already been conservatively addressed through the baseline downward adjustment, sampling confidence bounds, or other conservative provisions should not be adjusted a second time. For these parameters, the central estimate should be used in the uncertainty analysis rather than an already conservative value, to avoid double-counting uncertainty.	

15	12. Avoidance of double counting	Paragraphs 188-190	4C notes that the requirements in paragraph 189 to avoid double counting between Article 6.4 cooking activities and jurisdictional REDD+ programs may be difficult to implement reliably in practice. Paragraph 189 notes that the requirements for the avoidance of double counting with Jurisdictional REDD+ Programs "are applicable to Article 6.4 activities implemented in an activity boundary that overlaps with a jurisdiction (national or sub-national) that has implemented a jurisdictional REDD+ carbon program (e.g., the architecture for REDD+ transactions) or another similar program that provides results-based finance for jurisdictional-level REDD+ activities". It is unclear how project proponents would determine this overlap. While jurisdictional REDD+ projects focus on conserving forest areas within a specific administrative boundary, households very likely harvest woodfuels from both forest and non-forest areas within that same boundary. Determining what proportion of the woodfuel used by project households originates from areas covered by REDD+ monitoring and accounting, versus areas that are not, may therefore be difficult, particularly for charcoal projects, where harvesting is disassociated from project oversight. For example, a cookstove activity targeting urban charcoal consumers may not be able to determine precisely where the charcoal originates, or what fraction might come from within the boundaries of the jurisdictional REDD+ project. Furthermore, within any jurisdiction, forest loss and degradation generally result from multiple drivers, such as fuelwood and charcoal production, agriculture, livestock production, and timber extraction. Even where "the program documentation indicates that the forest reference emission level (FREL) includes the collection of fuelwood as a driver", it would be very complicated to attribute a specific portion of the jurisdiction's emission reductions to reduced fuelwood demand from an individual cooking activity. This creates a particular challenge for paragraph 189(d), which requires the activity participant to "provide evidence that the emission reductions claimed by the Article 6.4 activity are either not claimed by the REDD+ program or are	To 4C's knowledge, there is currently low risk of overlap between cookstoves and jurisdictional REDD+ projects. We therefore recommend that UNFCCC continues to investigate and track this potential overlap and, in the meantime, avoid requiring activity participants to demonstrate project-level attribution or accounting deductions where the information necessary to do so reliably is not available.

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			deducted from the program's GHG accounting." In most cases, neither the activity participant nor the relevant government authority may have sufficiently granular information to establish this attribution reliably. Early on, CLEAR considered taking a more precautionary, transparency-based approach where project proponents must report if there is any potential overlap with REDD+ projects, but with no associated discount to emission reductions. However, 4C decided not to include this reporting requirement in the CLEAR methodology because, without real-time data quality assurance, the data collected would be unreliable. If a project reports potential overlap between a cookstove project and a REDD+ project, additional details on project boundaries would still be necessary for the information to be helpful. Conversely, projects reporting no overlap cannot automatically be assumed not to overlap with a REDD+ project. To 4C's knowledge, the overlap between cookstoves and REDD+ projects is currently low risk. We therefore recommend that UNFCCC continues to investigate and track this potential overlap and, in the meantime, avoid requiring activity participants to demonstrate project-level attribution or accounting deductions where the information necessary to do so reliably is not available.	

16	4. Applicability	Paragraph 11 (a)(iii) and 11(b)(ii); pg. 22	The proposed methodology seems to exclude applicability for projects where AMM-00X' (the “Energy efficiency measures in household cooking" methodology)’ s applicability conditions are met. ***4C strongly recommends removing any exclusion for projects that also meet applicability conditions for AMM-00X.*** AMM-00X justifies its simplifications on practical grounds only, stating in the cover note that shared characteristics across its target population "permit simplification... due to standardization." There is no rationale to assume that standardized defaults are more accurate or higher integrity than measurement-based quantification, and therefore there is no reason to bar developers from choosing a more rigorous, measurement-based approach in preference to a simplified one. Administrative convenience for one methodology is not a valid basis for foreclosing access to a more accurate alternative. ***Further, restricting rural biomass projects to exclusively using a methodology that requires a baseline fuel consumption default that is significantly lower than measured baseline fuel consumption in most current carbon projects risks categorically disincentivizing rural biomass projects.*** In many poor rural contexts where biomass is collected and freely available, baseline fuel consumption can be quite high, and implementing projects in those areas should be incentivized from a climate impact perspective. That will not be the case if projects are required to use an artificially low standardized default for baseline fuel consumption. Of note, 4C doesn’t see a risk in overlapping eligibility between the two methodologies: MEP015 prioritizes accuracy through direct measurement, while AMM-00X relies on standardized defaults that trade off real-world accuracy for simplicity. Allowing developers to choose MEP015 allows them to use a methodology that better reflects the actual conditions of their project.	Delete condition 11(a)(iii) and 11(b)(ii) or revise it so AMM-00X eligibility does not preclude use of this methodology.
17	4. Applicability	Paragraph 11 (a)(i) and (b)(i); pg. 22	***4C strongly recommends removing the requirement in paragraphs 11(a)(i) and 11(b)(i) that activities involving improved biomass cookstoves be located in “non-urban areas, according to the relevant	Delete paragraphs 11(a)(i) and 11(b)(i), and determine eligibility based on baseline cooking fuel and other directly relevant characteristics of the target population rather than urban/non-urban status. If UNFCCC retains a

			national or sub-national government classification."*** The non-urban classification appears to be a mandatory applicability condition alongside the other requirements in paragraphs 11(a) and 11(b). Please clarify if this interpretation is incorrect. 4C asks the MEP to clarify the specific rationale for restricting these activities to non-urban areas (particularly where urban households continue to rely on fuelwood) and to rethink what underlying characteristic or risk the urban/non-urban distinction is intended to capture. 4C notes that a binary classification of an area as urban or non-urban is not a sufficiently consistent or meaningful basis for determining the eligibility of an improved cookstove activity. Definitions of urban and rural areas, the geographic level at which those classifications are available, and how frequently they are updated vary across countries. Where classifications exist, they may also be based on administrative boundaries, population thresholds, or other criteria that do not necessarily reflect household cooking practices, fuel access, energy infrastructure, or other characteristics relevant to the project activity. Furthermore, the distinction between urban and non-urban settings is often not binary in practice. Many households targeted by clean cooking activities live in peri-urban, rapidly urbanizing, or transitional areas that fall along a continuum between what might conventionally be considered rural and urban contexts. These areas can exhibit characteristics of both, and many cookstove activities operate in these settings. A binary administrative designation may therefore poorly reflect actual conditions on the ground and could result in otherwise comparable households or activities being treated differently under the methodology solely because of how their location has been administratively classified. More generally, it is not clear why improved fuelwood interventions should be categorically restricted to non-urban areas. In some countries, fuelwood remains a major cooking fuel even among urban households. For example, recent Demographic and Health Surveys (DHS) indicate that more than 40% of urban households cook primarily with wood in	geographic restriction, it should explain the rationale for doing so and provide an alternative means of demonstrating eligibility where an official classification is unavailable, outdated, or does not accurately reflect the cooking-energy context.

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			Uganda (2024/25), Ethiopia (2024/25), and Niger (2021). Therefore, an urban designation does not necessarily imply that households have transitioned away from fuelwood or that improved fuelwood interventions are no longer relevant. Excluding urban areas could make otherwise appropriate improved biomass activities ineligible even where the baseline cooking conditions clearly support such an intervention.	

18	4. Applicability	Paragraph 11 (a)(ii); pg. 22	***4C strongly recommends removing the applicability condition in paragraph 11(a)(ii), which requires activities to be located "in countries where rural electrification is below 50 per cent [and LPG distribution networks are not present]."*** First, it is unclear how the presence or absence of an LPG distribution network should be determined. The methodology does not appear to define what constitutes an LPG distribution network or the geographic scale at which this condition should be assessed. For example, it is unclear whether the presence of a single LPG retailer within a country or project area would be sufficient to determine that an LPG distribution network is "present," or whether the assessment should instead consider the density, geographic coverage, reliability, and accessibility of LPG supply to the target population. The presence of LPG infrastructure at the national level may have little bearing on whether LPG is actually accessible to households within a specific activity area. Without further specification, this condition could be interpreted inconsistently across projects. Second, 4C recommends removing the 50% rural electrification threshold. A reported electrification rate does not necessarily indicate that electricity is sufficiently available, reliable, or affordable for household cooking. A household may formally be considered to have access to electricity while facing limited service hours, insufficient connection capacity, high tariffs, or other constraints that make electric cooking impractical or unaffordable. Access to electricity is therefore not equivalent to effective access to electricity for cooking. Electricity costs also vary substantially across countries and between grid and off-grid systems, meaning that households classified as having electricity access may face very different economic circumstances when considering electric cooking. For example, current residential rates for grid differ by a factor of 20 between countries in SSA (Ethiopia is 0.01 USD/unit and Kenya is > 0.2 USD/unit) and mini-grids cost 3-5 times more than Kenya's rates. In addition, national or rural electrification statistics don't differentiate between stark regional inequalities within countries and may not	For the reasons mentioned above, 4C recommends removing the condition in paragraph 11(a)(ii). In case the MEP decides otherwise, we recommend replacing and clarifying this paragraph so that eligibility is based on the actual cooking-energy context of the target population rather than solely on national-level rural electrification rates and the presence or absence of an LPG distribution network. At a minimum, the methodology should define what constitutes an "LPG distribution network", including the geographic scale and minimum level of availability or accessibility necessary for such a network to be considered present; specify the source, reference year, and geographic level to be used in determining rural electrification rates; and allow activity participants to demonstrate that electricity and/or LPG are not reliably available, accessible, or affordable for cooking within the target population, even where national electrification rates exceed the proposed threshold or LPG supply infrastructure exists elsewhere in the country.

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			accurately represent conditions within the specific population targeted by the project. For these reasons, a country-level threshold of 50% rural electrification is not an appropriate proxy for whether improved biomass cooking remains an appropriate intervention for the target population. It also creates arbitrary eligibility outcomes where households with similar cooking-energy circumstances are treated differently solely because one country falls slightly above and another slightly below the 50% threshold.	
19	4. Applicability	General	4C recommends the inclusion of stoves that burn ethanol, pellets, and biogas (as well as LPG and biomass gasifiers), as we intended for CLEAR to cover all common cooking transition scenarios in order to support harmonization and consistency across clean cooking carbon projects, rather than needing multiple methodologies for the multiple technology and fuel types. Further, given that no other A6.4 methodology currently exists that covers these fuel-types, excluding ethanol, pellets and biogas limits options that meet WHO clean for health criteria, which are critically needed in LMIC contexts, and also represent some of the best potential emission reductions technologies.	Include stoves that burn ethanol, pellets, and biogas stoves as eligible.

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20	4. Applicability	12	Paragraph 12(h)(i) requires all biomass-burning project cookstoves to achieve a minimum thermal efficiency of 30%, with no differentiation by stove type. A uniform 30% threshold would exclude all plancha cookstoves from eligibility under this mechanism methodology. Plancha stoves use an open, flat griddle cooking surface rather than an enclosed pot, and are the standard cooking technology for preparing tortillas and other griddle-based foods relied upon by large populations, particularly in Central America and Mexico. This stove design is intentional and is MORE efficient in real terms - requiring less fuel energy to cook the same amount of food. Tests of thermal efficiency based on heat transfer to pots of boiling water are not well-suited to reflect the true gains in real efficiency these improved stoves provide. Thus, it should not be considered a performance shortfall to be incentivized away. Requiring plancha stoves to meet the same 30% thermal efficiency threshold as pot-based stoves sets a bar that is not achievable for this stove category as a matter of physics, not engineering quality, and would disqualify an entire, well-established cooking technology, and a cultural cooking practice large populations rely on and are not expected to abandon. More generally, a uniform threshold of 30% would exclude real, verifiable emission reductions, and not improve environmental integrity. The performance tests required for monitoring provide strong incentives for real-world performance, which is far more fundamental to the integrity of the emission reductions than a thermal efficiency test that is poorly suited represent plancha stove performance.	We recommend the MEP adopt differentiated thresholds instead, consistent with the approach in the CLEAR methodology (PMM004): 20% for plancha stoves, 25% for other biomass cookstoves, and 30 per cent for charcoal cookstoves.

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21	2. Definitions	7(v)	The mechanism methodology defines a user household as one with a functioning project cookstove used, on average, for at least five cooking events per week (or a higher threshold specified by the activity). We consider this threshold too high, and especially in the case of activities with monitored energy consumption, unnecessary. Crediting is based on energy consumption, not on user households. A household using the project cookstove less frequently displaces correspondingly less baseline energy consumption, and is credited accordingly. For activities with monitored (CTEC) energy consumption, there is no basis for a threshold stricter than one cooking event per week. Where fuel or energy consumption is measured directly through metering or tracked fuel sales, actual household-level consumption is known, not estimated from a sample average. A household using the project cookstove infrequently is credited only for the energy it actually displaces. There is no risk of overstatement or estimation error that a stricter usage threshold could mitigate in this case, since the threshold plays no role in the calculation once consumption is directly monitored. We therefore see no basis for CTEC activities under this mechanism methodology to apply a stricter threshold. For non-CTEC activities, a five-event threshold is also too high. Five cooking events per week is a high bar, close to daily use, and would exclude many households with genuine, partial adoption of the project cookstove from being credited for their real displaced energy consumption. We recommend the MEP adopt a materially lower threshold for non-CTEC activities than five events per week.	We recommend allowing a substantially lower threshold, and in the case of monitored (CTEC) activities specifically, adopt the CLEAR methodology's threshold of at least one cooking event per week on average.

22	15. Data and parameter not monitored	Data/Parameter Tables 9–10, p. 85	4C would like to reiterate this comment submitted in response to the call for input on A6.4-MEP014-A04 (https://unfccc.int/process-and-meetings/the-paris-agreement/article-6/article-64-pacm/stakeholder-engagement/calls-for-input/call-for-input-2026-recommendations-from-the-mep-to-sbm-022 : 4C welcomes the MEP's proposed revision of the default wood-to-charcoal conversion ratio from 4:1 to 5:1. This represents a meaningful improvement. However, available evidence supports a ratio of 6:1 as a more representative, and still conservative, default for charcoal production in low- and middle-income country (LMIC) contexts. In 2024, CCA and 4C partner Stockholm Environment Institute (SEI) conducted a literature review and analysis of charcoal conversion efficiencies in Sub-Saharan Africa. Across the studies included in the analysis, the sample-weighted average conversion efficiency was approximately 17%, corresponding to an oven-dry wood-to-charcoal conversion ratio of 6:1. Field-based measurements are particularly relevant because they reflect the operating conditions, production practices, and losses associated with real-world charcoal production. Studies conducted under field conditions in Ghana, Malawi, and Rwanda reported conversion ratios greater than 6:1. Furthermore, recent research by Urban et al. (2026) demonstrated a conversion factor of greater than 7:1. Given that the overall evidence indicates an average ratio of approximately 6:1, while field studies report substantially higher ratios, adopting a 6:1 conversion factor would improve the accuracy and representativeness of the default while remaining conservative. A table presenting the preliminary results from this analysis, as well as the sources is available at this link: https://docs.google.com/document/d/1yhe3IlFdHZXcZXSx0GRYIY1K563nfabbuoO72kl-yYU/edit?usp=sharing	Allow the use of a 6:1 charcoal conversion factor.
23	4. Applicability	General	During a call with the MEP in late April 2026, the MEP recommended that 4C submit the institutional cooking appendix through the public consultation on MEP013, Annex 2 – Draft mechanism methodology: Energy efficiency measures in household cooking (v.01.0), with the proposal that the	Clarify UNFCCC's intended process and timeline for incorporating the institutional cooking appendix into A6.4-MEP015-A01.

			appendix apply to both that methodology and A6.4-MEP015-A01 – Draft Mechanism methodology: Cooking energy transitions (v.01.0). Following that discussion, 4C accelerated and finalized the institutional cooking appendix in May so that the MEP could consider it for inclusion in the draft A6.4-MEP015-A01 now open for public input. 4C submitted the appendix through the online commenting form for MEP013, Annex 2, and separately sent it as a PDF attachment to the Article 6.4 methodology team on May 14, 2026. UNFCCC confirmed receipt on May 15. However, A6.4-MEP015-A01 remains focused on household cooking and does not include the institutional cooking appendix. 4C is concerned that this may result in additional delays in adopting the methodology, despite the effort made to finalize and submit the institutional appendix in May specifically to support its inclusion in the present consultation process. 4C would therefore appreciate clarification on the MEP's intended process and timeline for incorporating the institutional cooking appendix. If the appendix is still intended to be incorporated into this methodology, is this now expected to occur after the current public consultation, in a subsequent version of A6.4-MEP015-A01? If so, will stakeholders have an opportunity to review and provide input on the institutional appendix before the methodology is finalized? This is particularly important because while CLEAR itself has undergone many rounds of public review, the institutional appendix has not yet benefitted from a formal public review. There also appears to be an internal inconsistency in the present draft, since Appendix 9 contains several references to institutional users even though the methodology is currently limited household activities (e.g., paragraph 6 of Appendix 9 identifies the sampling population as potentially including: "Households or institutions receiving activity cooking technologies" and "User households or user institutions" and similarly, the stratification provisions identify: "Household or institutional user type").	
24	Cover note	General	4C recommends reconsidering the change in terminology from "Continuously Tracked Energy Consumption (CTEC)" to "monitored	Retain the CTEC/non-CTEC terminology, particularly given that the underlying CLEAR approaches remain substantially the same. If

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			energy consumption" and "non-CTEC" to "sampling-based energy consumption." The underlying quantification approaches in the draft methodology remain substantially aligned with the CTEC and non-CTEC approaches established in CLEAR. In addition, the term CTEC has been adopted in other clean cooking methodologies, such as Gold Standard's Metered & Measured Energy Cooking Devices V2 methodology. Introducing new terminology for essentially the same concepts risks creating unnecessary confusion for project developers, VVBs, standards bodies, and other market participants that are already familiar with the CLEAR terminology. The draft methodology also appears to retain references to "CTEC" in a few tables (in pg. 99, 103, 105, and 141) despite otherwise replacing this terminology with "monitored energy consumption."	the MEP decides to keep the terms "monitored energy consumption" and "sampling-based energy consumption," clearly state that these correspond to the CTEC and non-CTEC approaches, respectively, and revise all remaining references to "CTEC" in tables and elsewhere in the methodology to ensure consistent terminology throughout.
25	10. Non-permanence provisions	Paragraphs 182-184	We would like to reiterate 4C's comments submitted in July 2026 on the MEP014, Annex 07 - Draft methodological tool: Reversal risk assessment (v.01.0), available here: https://unfcccstawebprd01.blob.core.windows.net/pacm/Call_for_input/MEP014-A07-CFI-reversal-risk-Clean_Cooking_and_Climate_Consortium_(4C)-22.pdf Notably, the proposed tool uses the "absolute reversal" method from Wu et al. (2026) to calculate default values for natural reversal risks, which is not appropriate for clean cooking in the LMIC context.	4C recommends withholding the application of any non-permanence adjustment for activities reducing non-renewable biomass consumption until studies can be undertaken that better characterize the severity of disturbance and risk of reversals in landscapes most impacted by woodfuel production, and until it can be fully verified that the proposed approach, as currently specified, is suitable for setting defaults for reversal risks in clean cooking activities.