

BeZero Carbon methodology assessment report

Cookstoves:
AMS II.G (V14.0) &
VM0050 (V1.0)

October 2025



BeZero

Methodology details

Details	AMS II.G	VM0050
Standards body	Multiple	VCS
Standards body assessed	CDM	VCS
Start date	August 2008	October 2024
Number of versions	14	1
Date of most recent version	September, 2022	October 2024
Sub-sector applicability	Cookstoves	Cookstoves
Number of projects registered ¹	564	9
Number of credits issued	>59 million	
Number of rated projects (ex post)	43	0
Minimum Rating	C	
Median Rating	B	
Maximum Rating	BB	

Eligibility criteria

Criteria	AMS II.G	VM0050
Applicability	Applicable to improved efficiency projects only	Applicable to improved efficiency or fuel switch projects
Target population	Targets households only	Targets households, institutions and SMEs
Minimum energy requirements	Annual fuel savings must be ≤ 60 GWh thermal input	No minimum energy requirements
Thermal efficiency requirements	Projects must introduce devices with a rated thermal efficiency of at least 25%	No thermal efficiency requirements

¹ Based on BeZero's sector classified database

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Executive summary

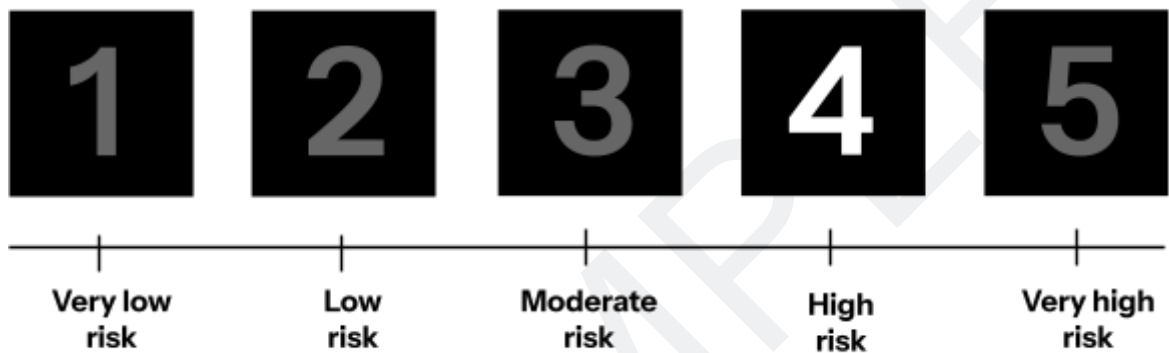
BeZero Carbon Methodology Assessment conclusion

The BeZero Carbon Methodology Assessment (BCMA) Score provides an overall assessment of the level of risk associated with how a methodology enables projects to make credible claims about their greenhouse gas (GHG) emission reductions or removals.

Methodologies are assessed and ranked in one of 5 risk tiers. Risk Tier 1 represents ‘Very low risk’ and the best possible score. Risk Tier 5 represents ‘Very high risk’ and the lowest possible score.

AMS II.G (V14.0)

BeZero ranks **AMS II.G (V14.0)** in Risk Tier **4** out of 5.



VM0050 (V1.0)

BeZero ranks **VM0050 (V1.0)** in Risk Tier **2** out of 5.



BeZero Carbon Methodology Assessment – Summary

Table 1. Summary of specifications for the scope of this assessment.

	AMS II.G	VM0050
Version assessed	V14.0	V1.0
Standard body	Clean Development Mechanism (CDM)	Verra (VCS)
Other specifications	N/A	N/A

Table 1. Risk driver comparison for Cookstoves methodologies assessed.

	AMS II.G (V14.0)	VM0050 (V1.0)
Additionality	High risk ▾	Low risk ▾
Carbon accounting	Low risk ▾	Very low risk ▾
Permanence	Not Applicable ▾	Not Applicable ▾
Governance & Transparency	Low risk ▾	Very low risk ▾
BeZero Carbon Methodology Assessment	Risk Tier 4 ▾ (High risk)	Risk Tier 2 ▾ (Low risk)

Table 2. Risk drivers & mitigators comparison.

Additionality		
AMS II.G High risk ▾	-- ▾	Projects which fall on the positive list do not have to demonstrate additionality. The positive list does not capture project-specific nuance and is general to a country rather than location-specific.
	- ▾	No requirement for financial analysis. Weak transparency on benchmarks. Free stove distribution allows for automatic additionality.
	+ ▾	The threshold for common practice could be conservative.
VM0050 Low risk ▾	+ ▾	Projects must conduct additionality testing rather than relying on the positive list or automatic additionality claims. The threshold for common practice appears arbitrary but could be conservative in certain situations. The assessment is specific to a locale so is likely to be more accurate.
	- ▾	Overlooking plausible alternatives may result in misclassification. Incorrect baseline framing may inflate credits or undermine integrity.

Carbon accounting		
AMS II.G	- ▾	Default values are outdated and lead to over-crediting. Lack of measurements means data is not project-specific. No digital MRV; relies on kitchen performance tests (KPTs). The method lacks consistency or accuracy in actual field conditions.
Low risk ▾		
	+ ▾	Emission factors are generally overly conservative and could be a form of under-crediting.
VM0050	+ ▾	Frequent surveys capture any baseline shift. Triangulation improves accuracy and reduces end user bias. Improves accuracy by capturing changes in usage patterns. Reduces risk of over-crediting by accounting for all stove usage. Required discount ensures that all projects account for leakage.
Very low ... ▾		
	- ▾	Sample may not be fully representative of end users. Risk of targeting non-representative households if not done rigorously. Risk of inappropriate sample if meters used.
Permanence		
AMS II.G	+/- ▾	Permanence not assessed for Cookstove Methodology Assessments
Low risk ▾		
VM0050	+/- ▾	Permanence not assessed for Cookstove Methodology Assessments
Very low ... ▾		
Governance & Transparency		
AMS II.G	+ ▾	Accredited Designated Operational Entities (DOEs) validate and verify all project data under ISO-equivalent standards. Comprehensive disclosure of project documents, methodologies, and decisions via the UNFCCC website
Low risk ▾		
	- ▾	Minor risks remain related to potential cross-standard double counting.
VM0050	+ ▾	Comprehensive public disclosure through the Verra Registry and robust tracking systems prevent double counting All projects undergo validation and verification by ISO-accredited, independent third-party auditors Verra's VCS meets the ICVCM's Core Carbon Principles (CCPs), confirming strong governance, transparency, and disclosure standards.
Very low ... ▾		

1. AMS II.G (V14.0): BeZero Carbon Methodology Assessment

BeZero ranks **AMS II.G in Risk Tier 4** , based on the methodology's frameworks and governance mechanisms in place to enable projects to make credible claims about their greenhouse gas (GHG) emission reductions or removals. This score is driven by a low robustness of additionality tests and criteria, and a very low appropriateness of carbon accounting requirements.

1.1 Additionality: High risk

Risk factor summary

AMS II.G allows projects to claim additionality via a broad positive list, without detailed analysis of local context or alternative scenarios. Common practice assessments are optional and based on national data, which may overlook local adoption. Financial and barrier analyses are only required if the project isn't on the positive list and offer limited scrutiny. No tests for regulatory surplus or policy overlap are mandated, exposing the methodology to high risk of crediting non-additional projects.

Activity in analysis

Positive List

Required - Yes

Under AMS-II.G, the positive list is an optional pathway to demonstrate additionality. A project qualifies if the penetration of efficient cookstove technology is lower than 2.5% of annual sales in the host country or justified sub-region. If the project meets this condition, it is considered automatically additional, meaning no further investment or barrier analysis is required. If not, project developers could prove additionality using other approved tools (e.g., TOOL21 or TOOL19)

Alternative Scenario

Required - No

Common Practice

Required - Optional

Common practice testing is optional for projects not on the positive list. If performed, it relies on national data to determine the penetration rate of clean cooking technologies. A penetration rate above 20% results in non-additionality. However, there's no requirement to tailor the analysis to the project region or population, nor is there guidance on how to assess the uptake of comparable technologies. This can result in over- or under-crediting due to misaligned geographic scales.

Financial analysis

Investment analysis

Required - Optional ▾

Projects that qualify under the positive list are exempt from investment analysis. In addition, projects considered first-of-their-kind are assumed to be financially additional.

For other projects, the method requires comparison of project IRR/NPV with market benchmarks and sensitivity analysis. However, it lacks clear benchmarks, and projects distributing stoves for free are assumed additional, which can be misleading. Furthermore, the allowance of first-of-its-kind as a proxy for financial additionality reduces scrutiny and opens the door for projects that might already be viable.

Barrier analysis

Required - Optional ▾

Barrier analysis is another optional route if the project is not on the positive list. It allows developers to claim that the project faces institutional, technological, or financial barriers that prevent implementation without carbon finance. However, the methodology does not require explicit linkage between carbon finance and the resolution of these barriers, which reduces credibility. It also allows shallow, unverified justifications.

Legal and policy

Regulatory Surplus

Required - No ▾

Legal and Policy

Required - Optional ▾

This methodology provides no structured process for assessing existing or upcoming legal and policy frameworks. It does not consider whether a project is incentivised (rather than mandated) by other mechanisms, which could undermine additionality even if regulatory surplus technically holds.

1.2 Carbon accounting: Low risk ▾

Risk factor summary

Carbon accounting under AMS II.G is relatively flexible and light on rigour. Projects can use default values for key variables like fuel consumption and stove efficiency, often based on outdated assumptions. Usage monitoring is based on unverified surveys, with no caps to prevent overclaiming. Stove stacking is optional. Emission factors and fNRB values are not always aligned with current science, and leakage assessments are minimal. Overall, the methodology permits significant assumptions and offers limited safeguards.

Direct accounting

Baseline scenario

AMS II.G takes a relatively permissive approach to baseline scenario assessment. Projects may rely on literature or census data instead of direct surveys, which are optional and can be remote. Baseline fuel consumption and thermal efficiency can be derived from default values or calculated indirectly from project fuel consumption. This flexibility introduces several risks: data may not be project-specific or representative, outdated defaults may be used, and key variables like thermal efficiency can be overestimated, leading to potential overcrediting. There is no requirement for periodic re-assessment, so changes in baseline practices over time may be missed.

Project scenario

AMS-II.G does not require project fuel consumption to be directly measured. Instead, it can be estimated by applying baseline fuel consumption values and adjusting them using the ratio of baseline to project stove thermal efficiencies. This means project fuel use is derived rather than monitored directly, which may reduce the robustness of carbon accounting.

In addition, project measurement requirements are weakly defined. While thermal efficiency must be measured via Water Boiling Tests (WBTs) or manufacturer specs, the WBTs may follow outdated protocols and do not require tracking performance losses over time. Project fuel consumption measurements rely heavily on KPTs without stringent guidance or caps, which undermines consistency and accuracy. Usage monitoring can be based on remote surveys without stratification or verification, and there are no usage caps, allowing for potential overclaiming. Stove stacking is optional, meaning continued use of baseline stoves may go unaccounted for.

GHG conversions

This methodology allows use of outdated or overestimated non-renewable biomass (fNRB) values and does not require fuel-specific emission factors, increasing the risk of overcrediting. While it acknowledges that emission factors for charcoal may be underestimating emissions, no clear rules mitigate these risks.

Leakage accounting

Leakage accounting is minimal. Activity displacement is optional, and market leakage is not considered at all. This could result in underestimation of emissions occurring outside the project boundary due to increased demand for clean cookstoves or shifting of traditional practices elsewhere.

1.3 Permanence: Not applicable ▾

Risk factor summary

Permanence is not assessed for Cookstove Methodology Assessments.

1.4 Governance & Transparency: Low risk ▾

Risk factor summary

Governance and transparency risks under the CDM are considered low due to robust institutional oversight and open disclosure mechanisms. Independent Designated Operational Entities (DOEs), accredited under ISO-equivalent standards, conduct validation and verification of project data. The CDM Executive Board oversees accreditation, performance monitoring, and publishes all rules, procedures, and DOE statuses. Public access to project documentation, methodologies, and decision records via the UNFCCC website enhances traceability and accountability. While limited confidentiality provisions apply to proprietary data and cross-standard double counting risks persist, the overall governance framework ensures high transparency and strong governance.

Independent auditing

Validation and verification of project data and emission reductions under CDM are conducted by Designated Operational Entities (DOEs) accredited under the CDM Executive Board (EB). DOEs must demonstrate competence, impartiality, and independence, following principles equivalent to ISO 14065 and ISO 14066.

All emission reductions are subject to ex-post verification prior to the issuance of Certified Emission Reductions (CERs). The EB maintains a public list of accredited DOEs, detailing their status (active, suspended, withdrawn), and performs regular performance and witness assessments. Validation and verification procedures, accreditation criteria, and quality control rules are publicly available through the UNFCCC website.

Disclosure of project data

Transparency in CDM is ensured through the UNFCCC CDM Registry and project database, which publish key documentation including Project Design Documents (PDDs), monitoring reports, validation and verification reports, issuance data, and approved methodologies. Each project undergoes a public stakeholder consultation during validation, and methodologies are subject to open review before approval.

While these mechanisms ensure disclosure of all material information relevant to carbon accounting and issuance, project developers may mark certain inputs (e.g., financial data, proprietary emission factors) as confidential, with justification to the DOE and EB. Such information is withheld from public release, prioritising commercial confidentiality over full data transparency.

Double counting

Each CER issued under CDM carries a unique serial number within the UNFCCC Registry, which records issuance, transfer, and retirement. When credits are transferred to another registry, the system ensures retirement or cancellation in the original registry before transfer, maintaining a single chain of custody and preventing duplicate use or issuance. Ownership and transfer rules are publicly documented under the CDM Registry Regulations.

However, recording credit transactions across registries remains a major challenge in the market. There is limited transparency when transfers occur between major registries, such as notably common movements from CDM to GS or VCS, and even less when national registries are involved. Furthermore, obtaining transfer or cancellation certificates is often a complex and unreliable process. As a result, avoiding cross-standard duplication relies on external due diligence or host-country oversight rather than the CDM's registry infrastructure.

Methodology development & oversight

New and revised CDM methodologies are drafted by project participants or DOEs and submitted to the EB through a formal procedure. These submissions are reviewed by the Methodologies Panel and relevant working groups before the EB makes a final decision. While sponsors are typically market participants, reviewers are independent experts appointed based on competence and conflict-of-interest criteria. Final approval authority rests solely with the EB, ensuring independence from project proponents. Nonetheless, initial drafts from proponents may introduce some degree of bias.

The CDM also invites public input on methodologies, tools, and specific issues. Project Design Documents (PDDs) undergo global stakeholder consultation during validation. When a methodology is developed or revised, the UNFCCC publishes the submission, panel recommendations, EB meeting and decision documents, approved methodologies and tools, and related consultation notices. The methodology portal and booklet consolidate approved and updated methods to enhance transparency and traceability. All consultation records and EB annotated agendas are publicly accessible.

2. VM0050 (V1.0): BeZero Carbon Methodology Assessment

BeZero rank **VM0050 in Risk Tier 2** ▾, based on the methodology's frameworks and governance mechanisms in place to enable projects to make credible claims about their greenhouse gas (GHG) emission reductions or removals. This score is driven by a high robustness of additionality tests and criteria, and a high appropriateness of carbon accounting requirements.

2.1 Additionality: Low risk ▾

Risk factor summary

VM0050 takes a stricter approach to additionality. All projects must conduct detailed assessments covering alternative scenarios, local common practice, and financial viability. The methodology prohibits reliance on a positive list and requires project-specific data and verifiable evidence that carbon revenue is decisive. It also mandates evaluation of legal and policy frameworks, including regulatory surplus and forward-looking policy risk. Despite limited implementation guidance, VM0050 substantially reduces the risk of crediting business-as-usual projects.

Activity analysis

Positive List

Required - ☐ Optional ☒

This methodology provides a simplified way to demonstrate additionality through a positive list. A project qualifies for the positive list if it meets both of the following conditions:

- It replaces inefficient biomass stoves with efficient ones, fossil fuel stoves with renewable biomass stoves, or introduces electric cookstoves; and
- The improved stoves are distributed free of charge, with carbon credit sales as the sole revenue source.

Projects that meet these criteria are automatically considered additional and do not require barrier or investment analysis. Projects that do not qualify must demonstrate additionality through a more detailed assessment.

Alternative Scenario

Required - ☐ Yes ☒

VM0050 mandates an alternative scenario assessment, where developers must identify and justify the most likely baseline scenario in the absence of the project. However, it lacks detailed guidance on how to define, stratify, or rigorously evaluate alternative scenarios. If conducted poorly, this could lead to underdeveloped baselines or overlooked plausible alternatives, but the requirement itself is a critical safeguard.

Common Practice

Required - ☐ Optional ☒

For projects that don't fall on the positive list, VM0050 requires projects to collect quantitative data on the prevalence of similar technologies in the region over the past decade, with comparisons made in terms of scale and context. However, there is little guidance on how this analysis should be conducted or on the sources of data to be used. If the penetration of clean fuels or technologies exceeds 20 percent, the activity is classified as common practice, and the project is therefore considered non-additional. While this threshold may appear arbitrary, it could serve as a conservative safeguard in certain circumstances. Moreover, because the assessment is conducted at the local level, it is likely to provide a more accurate reflection of conditions on the ground.

Financial analysis

Investment analysis

Required - ☐ Optional ☒

Projects that do not meet positive list conditions must prove additionality through either a barrier analysis or an investment analysis, in addition to the common practice analysis.

Within the investment analysis, the project must provide verifiable evidence that carbon revenue is strictly decisive for implementation. This requirement is more robust than earlier CDM approaches, as it avoids the “first-of-its-kind” exemption.

To prove additionality, projects must show that carbon credit revenue improves a financial indicator, such as the internal rate of return (IRR), to meet or exceed the relevant industry benchmark.

However, the lack of clear guidance on appropriate benchmarks leaves room for weak or unrealistic assumptions, which may exaggerate the impact of credits.

Barrier analysis

Required -

Barrier analysis is mandatory if selected over investment analysis (for projects not on the positive list). Projects must demonstrate direct, verifiable connections between each identified barrier and the impact of carbon finance. The methodology bans vague or deprecated claims (e.g., “technological barriers”) and insists on project-specific evidence, greatly increasing analytical integrity and resistance to manipulation.

Legal and policy

Regulatory Surplus

Required -

VM0050 requires demonstration of regulatory surplus (projects must prove they are not legally required under existing policies). This reduces the likelihood of crediting mandatory activities. However, the methodology lacks detailed guidance on how deep or broad the policy review must be, and does not assess whether laws are enforced in practice, which could result in over-conservatism or false negatives.

Legal and Policy

Required -

In addition to regulatory surplus, VM0050 requires a forward-looking legal and policy assessment, evaluating whether any anticipated changes in legislation could make the project mandatory in the future. This is a proactive measure that helps future-proof additionality claims, though again, the methodology offers limited guidance on how to execute this rigorously or account for non-mandatory policy incentives.

2.2 Carbon accounting: Very low risk ▾

Risk factor summary

VM0050 applies high standards across all aspects of carbon accounting. Baseline and project fuel consumption must be directly measured using robust sampling. Stove efficiency must be field-tested, and usage monitoring is capped unless digital sensors are used. Stove stacking is mandatory and must be factored into crediting. Emission factors and fNRB values must reflect the

latest science, and activity leakage is conservatively accounted for with a required discount. This ensures more accurate and conservative emissions reductions.

Direct accounting

Baseline scenario

VM0050 imposes rigorous requirements. Surveys are mandatory and must include control households, be stratified, use triangulated methods (e.g., observation, photographs), and be repeated every five years during the most conservative season. Baseline fuel consumption must be directly measured or derived through KPTs, with statistically sound sampling protocols. While default values are allowed for thermal efficiency, they are aligned with current science (15% for wood, 25% for charcoal), reducing the risk of overcrediting. The main residual risk lies in potentially unrepresentative samples and the complexity of implementation.

Project scenario

VM0050 introduces stricter requirements for project scenario assessment. Fuel consumption must be measured directly or through KPTs with statistically robust sampling. Stove thermal efficiency must be measured using standardized tests like WBTs (default values are not permitted). Usage monitoring must rely on either continuous monitoring or regular household surveys. Projects can only claim 100% usage if digital sensors (e.g., SUMs) are used and meet data integrity standards; otherwise, an 80% cap applies. Stove stacking must be accounted for through reliable data collection methods and incorporated into crediting via adjustment factors. These rules ensure a high degree of accuracy, though they may increase project complexity and cost.

GHG conversions

Similar to AMS II.G, VM0050 allows CDM Tool30 to derive the fNRB; however, a 26% discount must be applied. VM0050 also enables developers to use the global default fNRB stated in CDM Tool33 or recent national defaults published by the UNFCCC. These methods may improve the accuracy or increase the conservatism of emission reduction calculations.

VM0050 cites IPCC defaults as an option for the CO₂ and non-CO₂ emission factors associated with baseline and project fuels. These values are generally accepted as appropriate, and in charcoal scenarios, defaults appear conservative. Other options include project-specific values, which are accredited through using specific fuel standards, or national/regional defaults, although the methods at which these are derived and the acceptable sources of data are unknown.

Leakage accounting

Activity displacement is mandatory and conservatively addressed through a default 0.95 discount applied to all projects. While this ensures all projects account for leakage, it may not reflect actual leakage levels, leading to under- or over-estimation. Market leakage, like in AMS II.G, is not accounted for.

2.3 Permanence: Not Applicable ▾

Risk factor summary

Permanence is not assessed for Cookstove Methodology Assessments

2.4 Governance & Transparency: Very low risk ▾

Risk factor summary

Verra's Verified Carbon Standard (VCS) has been recognised as meeting the Core Carbon Principles (CCPs), developed by the Integrity Council for the Voluntary Carbon Market (ICVCM). The CCPs set out ten science-based criteria to ensure high-integrity carbon credits, with four of them focusing on governance. Meeting CCP eligibility supports a finding that Verra's rules for transparency, disclosure, governance, and independent verification are sufficiently robust and present very low risk.

Independent auditing

The VCS requires all project data, GHG accounting, and claims to be validated and verified by an accredited, independent third-party VVB. VVBs must hold accreditation under ISO 17029 and/or ISO 14065 and be approved by Verra before conducting audits. They must remain fully independent from project proponents, with explicit prohibitions on offering both consultancy and assurance services to the same client. In addition, the VCS Standard states that a VVB shall not verify more than six consecutive years of a project's GHG emission reductions or removals.

Verification is ex-post and must occur at least once every five years, though more frequent verification is allowed for credit issuance. VVBs apply a risk-based verification approach, determining their own statistically valid samples and correcting all material misstatements above defined thresholds. This process, aligned with ISO assurance standards, ensures robust and impartial project evaluation.

Disclosure of project data

Verra enforces transparency through the public Verra Registry. All key documents, including Project Design Documents, Monitoring Reports, and Validation/Verification Statements, are publicly available, alongside methodology documentation and revision histories.

Projects are subject to a 30-day public comment period, during which stakeholder feedback must be reviewed and addressed before validation can proceed. Additional data requests can be submitted through the registry.

Double counting

The VCS establishes safeguards against double issuance, double registration, and double claiming of emission reductions. Projects cannot be registered under multiple programs for the same activity,

and written declarations are required for any prior registrations. Verra also participates in the Climate Action Data Trust (CADT), a cross-registry metadata platform designed to flag overlapping project registrations across standards. Projects must also demonstrate that emission reductions are not claimed by both the project and the host country's NDC. Where applicable, corresponding adjustments must be made under Article 6 of the Paris Agreement.

Each Verified Carbon Unit (VCU) is assigned a unique serial number and tracked in the Verra Registry, ensuring transparent ownership, transfer, and retirement. Once retired, a VCU is permanently removed from circulation.

For AFOLU projects, the VCS requires precise geospatial delineation (KML polygons), clear ownership details, proof of non-overlap with other VCS AFOLU projects, and verified control over the entire project area. Grouped projects must likewise ensure no overlap when adding new instances.

Methodology development & oversight

New methodologies under Verra's standard may be proposed by external stakeholders or Verra, but are developed under Verra's governance, with conflict-of-interest safeguards and independent technical evaluations by qualified experts.

Each draft undergoes at least one 30-day public consultation, during which all comments must be formally addressed and summarised in a public response report. Final methodologies, expert reviews, and revision histories are published on Verra's website to ensure transparency and traceability. Methodologies are also reviewed at least every five years, or sooner if emerging science or policy developments warrant updates.

3. Beyond carbon – Safeguard requirements

This section provides additional commentary on safeguard requirements from the methodology, which are designed to help ensure projects deliver fair, inclusive, and sustainable outcomes for people, ecosystems, and society.

BeZero has identified nine risk drivers linked to potential socioeconomic and environmental impacts. Our review of safeguard requirements reflects how these risks are addressed in the standards, but it does not assess how effectively safeguards will be implemented in practice or how well they will mitigate risks.

3.1 Clean Development Mechanism (CDM)

Socioeconomic impact

Land and Resource Rights

Required - No ▾ Missing ▾

Labour and Livelihoods

Required - No ▾ Missing ▾

Diversity and Equity

Required - No Missing

Benefit sharing

Required - No Missing

Stakeholder engagement

Required - Partially Limited

Health and education

Required - No Missing

Environmental impact

Ecosystems and Biodiversity

Required - Partially Limited

Natural Resources and Natural Hazards

Required - Partially Limited

Pollution

Required - Partially Limited

3.2 Verra's Verified Carbon Standard (VCS Standards v4.7)

Socioeconomic impact

Land and Resource Rights

Required - Yes Substantial

Labour and Livelihoods

Required - Yes Substantial

Diversity and Equity

Required - Yes Substantial

Benefit sharing

Required - Yes Partial

Stakeholder engagement

Required - Yes Substantial

Health and education

Required - Partially Limited

Environmental impact

Ecosystems and Biodiversity

Required - Yes Substantial

**Methodology specific requirements may apply*

Natural Resources and Natural Hazards

Required - Yes Partial

**Methodology specific requirements may apply*

Pollution

Required - Yes Partial

**Methodology specific requirements may apply*

4. Market Alignment

This section examines how the methodologies align with other market principles and standards, including internationally recognised integrity frameworks, domestic market eligibility rules, and acceptance by global initiatives such as CORSIA and the Integrity Council for the Voluntary Carbon Market (ICVCM).

Table 3. Alignment with market principles and standards for cookstoves methodologies

	AMS II.G	VM0050
CORSIA	No	Yes
Core Carbon Principles eligible	No	Yes
Paris Agreement Crediting Mechanism (PACM)	Yes	Not yet

AMS-II.G

- Credits issued under AMS-II.G are excluded from CORSIA's first-phase eligibility.
- AMS-II.G does not satisfy the ICVCM Core Carbon Principles (CCPs) on robust quantification, as its approaches to measuring fuel consumption and technology usage are considered insufficiently rigorous.
- The first project approved to transition from the Clean Development Mechanism (CDM) to the PACM uses the AMS-II.G methodology.

VM0050

- Projects applying VCS Methodology VM0050 are eligible under CORSIA's first phase.
- The ICVCM has approved VM0050 as meeting its CCPs, provided that certain conditions are met.
- To date, no PACM project has used VM0050.

SAMPLE

Appendix I: Methodology context

There are at least six major cookstove methodologies: AMS II.G, VMR0006, VM0050, GS TPDDTEC, GS Simplified, and GS Metered & Measured. We are starting to see a convergence between methodologies in more recent versions and updates, yet there are still some key differences between these that can drive variance in project quality.

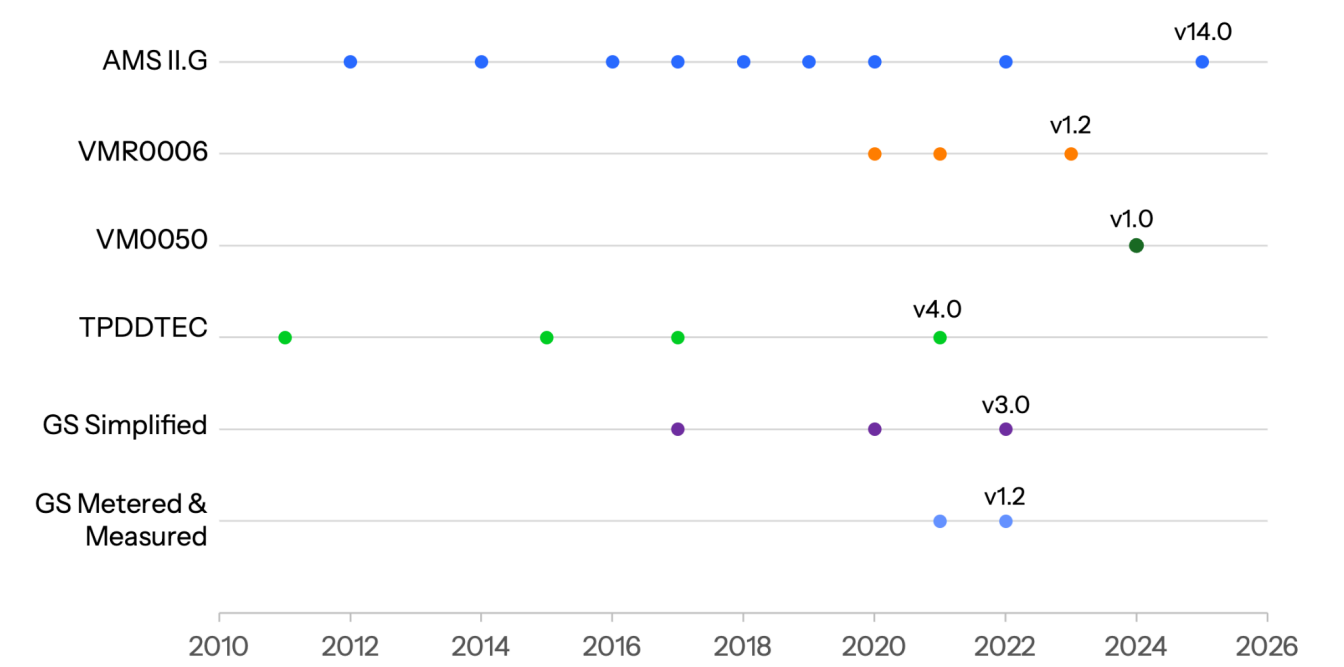


Figure 1. Timeline for release dates of different versions of the six major cookstove methodologies. We have collectively rated projects issuing credits under five of these methodologies, with ex post ratings ranging from ‘A’ to ‘D’. No projects have yet issued credits under VM0050.

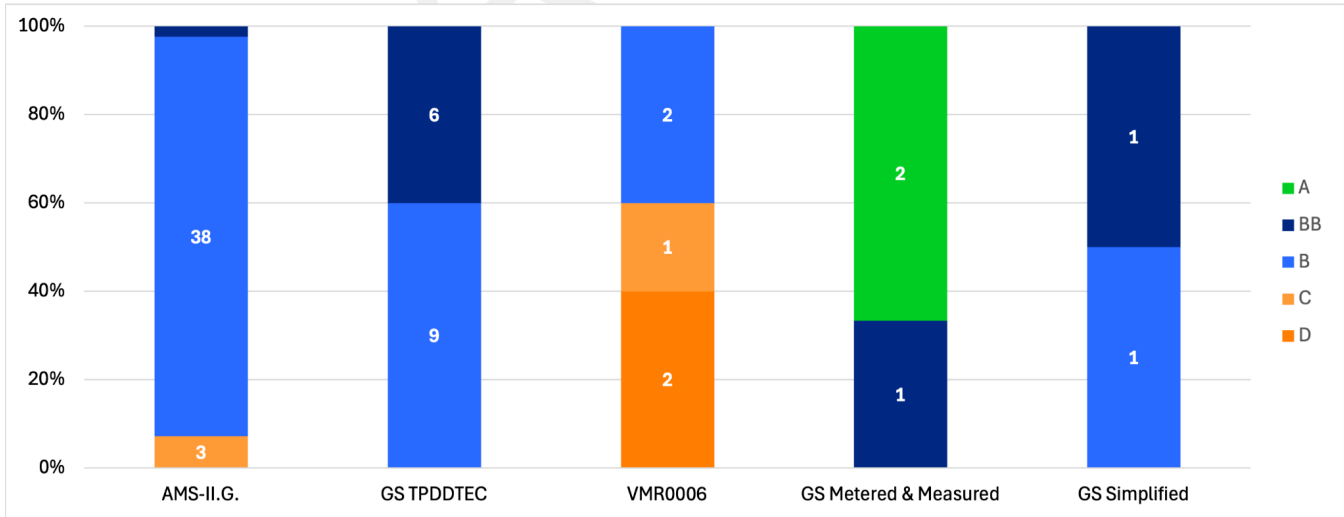


Figure 2. Distribution of project ratings by cookstove methodology.

In general, we have seen an improvement in methodologies through time, particularly with respect to carbon accounting and incorporating thresholds and safeguards to limit uncertainty. For example, newer methodologies such as VM0050 and GS Metered & Measured show trends toward stricter

baseline monitoring and usage tracking, as well as relying on the most up to date fNRB values. There is also an increasing reliance on direct measurement rather than default values, which improves project specificity and can help to ensure accurate crediting.

Typical risks that we have seen across previous methodologies include an over-reliance on default values, a lack of substantiated claims, outdated assumptions, and incomplete additionality testing. Projects may also fail to capture real-world fuel use patterns or stove stacking behavior due to a lack of robust MRV.

SAMPLE

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