

*Verra VCS*

*Energy Efficiency  
and Fuel-Switch  
Measures in  
Cookstoves, v1.0.*

*(VM0050)*

Jessica Wade-Murphy de Jimenez

Atmosphere Alternative

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# INTRODUCTION

- New cookstove methodology released! - **Energy Efficiency and Fuel-Switch Measures in Cookstoves**, v1.0. (VM0050)
- Released on October 9, 2024, and is ready for use; more than 2 years in the making
- [Atmosphere Alternative](#) (external consultant) led the development of *VM0050* with Verra helping
- A comprehensive and robust new methodology that quantified emission reductions from energy efficiency and fuel-switch measures in cookstoves
- Wider adoption will further strengthen the credibility and integrity of cookstove projects and resulting emission reductions
- Verra submitted this methodology for assessment under ICVCM's CCP labelling and aims for approval
- Verra is planning to review the final CLEAR methodology for further alignment opportunities once it is released
- Verra is committed to collaborating with other stakeholders in this space to continuously strengthen integrity in the cookstove sector and include best practices/approaches in this methodology

# MOTIVATION

The development of *VM0050* was chiefly motivated by the following factors:

1. Addressing criticism of overestimation in existing cookstove methodologies from various sources,
2. Alignment with the latest scientific understanding and recent developments,
3. Alignment with ICVCM for securing CCP labelling,
4. Decreasing dependence on CDM methodologies and becoming self-reliant, and
5. Making clarifications and general editorial improvements.

# KEY UPDATES AND STANDOUT FEATURES



# PATHWAY TO BETTER, LOWER EMISSIONS TECHNOLOGY

- Minimum Project stove efficiencies of 25% (biomass), 30% (liquid fuels), 40% / 70% (electric)
- Energy transition & avoiding lock-in: LPG only eligible through 2045, metering required (at sale or at use)
- Replacement of Project devices at end of useful life with comparable or better performing devices

# AVOIDING DOUBLE COUNTING

- Reporting required on co-existence of biomass efficiency projects with REDD activities
  - Where project activities reduce emissions from non-renewable biomass, including firewood and charcoal, the risk of double counting is assessed on a national basis by evaluating at validation and crediting period renewal whether there are REDD+ projects or jurisdictional REDD+ programs whose project boundary overlaps with the expected fuel source area of the project.
- Requirement to provide a .kml file showing the origin of the non-renewable biomass fuel and a description of how that area is defined

# ADDITIONALITY

- Aligned with ICVCM
- Requires a regulatory surplus check



# QUANTIFICATION OF REDUCTIONS

Calculate baseline emissions from baseline measurement (or default)



Calculate project emissions from cooking from project measurements



Cross-check baseline for accuracy & conservativeness



Calculate other project emissions



Estimate leakage



# EMISSION REDUCTIONS

- Follow-up surveys every 2 years to check that the baseline remains sufficiently similar (fuel types, sources, technologies, household size)
  - Re-measurement of baseline fuel use if the background conditions change significantly
- Emission reductions calculated only for baseline cooking replaced by the project activity, side-stepping stove-stacking
  - Methodology requires data collection on other stoves in use, as an informational exercise that Will inform future versions of the methodology

# EMISSION REDUCTIONS

- Sets precedent for applying MoFuSS values, once these are approved by the CDM EB or other relevant UNFCCC body

UNFCCC has not approved the national default values (based on MoFuSS) at the time of publishing this methodology.

Project proponents may use the most recent available draft fNRB default values but must apply the updated approved default values for any verification requests submitted after UNFCCC approval of the default values.

- Where switching to the approved default fNRB is the only proposed change to a registered project design, project proponents do not need to follow the methodology and/or project description deviation process.

# MONITORING

- Alternative to use SUMs to determine Project stove use %
  - Otherwise, survey-based value at lower end of 90% CI with kitchen observation
- Alternatives for measurement of project energy use or fuel purchase (either 100% or sample-based)
- When KPTs are used, options to adjust the KPT protocol to incorporate digital monitoring systems (described in Appendix 4)

# ATMOSPHERE ALTERNATIVE

## **Q&A and THANK YOU**

Jessica Wade-Murphy  
General Director and  
Founder

[jwm@atm-alt.com.co](mailto:jwm@atm-alt.com.co)