

REPUBLIC OF RWANDA



MINISTRY OF INFRASTRUCTURE

Ministerial Guidelines for Clean Cooking Technologies

December 2022

TABLE OF CONTENTS

Contents

PREFACE.....	3
CHAPTER ONE: GENERAL PROVISIONS.....	4
Article 1: Objectives.....	4
Article 2: Scope.....	4
Article 3: Definitions.....	4
Article 4: Rationale.....	6
CHAPTER TWO: CLEAN COOKING TECHNOLOGIES.....	7
Article 5: Minimum Quality requirements.....	7
5.1: Fuels.....	7
5.2: Appliances.....	8
5.3: Families of products.....	9
CHAPTER THREE: SHIFTING PRINCIPLES.....	16
Article 6: Clean Cooking Institutional Framework.....	16
6.1 Institutional Roles and responsibilities.....	16
6.2: Requirements to be fulfilled by clean cooking Market Aggregators.....	17
Article 7: Monitoring and Evaluation.....	18
Article 8: Repealing provision.....	18
Article 9: Commencement.....	18

PREFACE

The Government of Rwanda recognizes the vital role that clean cooking plays in accelerating the country's development through improving health of its citizens and creating economic opportunities. Modernizing cooking technologies and practices is at the same time a major contributor to tackling deforestation and combatting climate change. Despite various separate initiatives in the clean cooking subsector that took place over the years, more coordinated efforts must be made for the Government to meet the targets set for the reduction in the use of inefficient cooking technologies and the rebalancing of demand and supply of wood.

To meet the target of reducing the dependence on biomass as a source of cooking energy from the current 77.7% to 42% by 2024, the Ministry of Infrastructure developed the Biomass Energy Strategy (BEST). BEST focuses on reducing the use of wood energy resources through promotion and adoption of alternative clean and efficient cooking solutions: liquefied petroleum gas, biogas, liquid fuels, pellets, briquettes, electricity and improved clean burning cooking stoves. One of the key recommendations of the Biomass Energy Strategy is the development of instructions and guidelines to promote clean cooking technologies.

Current market assessments identify technologies that have so far been tested and show performance shortfalls mainly in terms of reducing carbon monoxide (CO) from charcoal stoves and fine particulate matter (PM_{2.5}) emissions from wood stoves, both of which are hazardous to humans and can cause severe, irreparable damage. Moreover, the thermal efficiency achieved in the case of wood stoves places them on tier 2 or tier 3 not far above the tier 2 values. Stoves powered by other fuel technologies indicate high thermal efficiency performance capabilities with greatly reduced emissions of CO and PM_{2.5}.

The purpose of these guidelines is to provide guidance for shifting from low performance cooking stoves burning woody biomass to modern, high efficiency, low emissions (HELE) appliances. The guidelines recommend various technologies to be promoted and propose the transition, monitoring and evaluation mechanisms.

These guidelines apply to households in rural and urban setup, restaurants and hotels as well as public and private institutions.

These guidelines build on existing up-to-date standards, regulations, policies and related national strategies so as to provide a transitional strategy to higher performance solutions that mitigate the negative environmental and health impacts associated with the use of low performance technologies.

CHAPTER ONE: GENERAL PROVISIONS

Article 1: Objectives

The objective of these Ministerial Guidelines is to enforce adoption of modern clean cooking practices in households and institutions transitioning from traditional biomass energy carriers to clean and energy-efficient technologies that deliver associated socio-economic, health and environmental benefits.

These guidelines will streamline the enforcement of existing standards or those under development.

More specifically, these guidelines aim to:

- Put in place a mechanism and support programs that encourage all public institutions to switch to clean and efficient cooking technologies;
- Facilitate and support the private sector to invest in clean cooking technologies;
- Support capacity building and knowledge transfer to local manufacturers to reduce their costs and promote “Made in Rwanda”;
- Streamline frameworks for establishing financial access schemes that facilitate adoption of clean cooking solutions;
- Disseminate, reinforce and enforce regulations and standards related to clean cooking technologies in Rwanda;
- Coordinate and contextualize target setting, data collection, monitoring and reporting mechanism of biomass reduction initiatives.

Article 2: Scope

These guidelines provide guidance for the coordination of clean cooking technologies dissemination. Its scope of application covers urban and rural households, restaurants, banquets and hotels as well as big institutions (schools, prisons, hospitals, health centers, refugee camps, military and police camps, etc).

Article 3: Definitions

Unless the context otherwise requires, the terms used in these guidelines shall have the following meaning:

Biogas: Gas produced by anaerobic digestion of organic matter, gasification of biomass or power to gas from biomass sources and without further upgrading or purification.

Biomass: solid plant based fuels for example from trees, bushes and shrubs.

Briquettes: Densified biofuel made from biomass material with or without additives in form of cubic form, prismatic or cylindrical unit with diameter of more than 25 mm produced by compressing milled biomass.

Clean cooking stove/technology: cooking stove that reduces emissions to an acceptable level when fed with a defined fuel or fuels with emissions performance parameters below Tier 3 emission parameters.

Cooking stove: appliance primarily used for the cooking of food but which can also be used for space or water heating, or other purposes.

Ethanol: is a renewable fuel made from various plant materials collectively known as "biomass".

Fuel: Materials such as wood, charcoal, crop residue, pellets, briquettes, Liquefied Petroleum Gas (LPG), Compressed Natural Gas (CNG), ethanol, etc. that is burned to produce heat;

Improved cooking stove: Cooking stove that has been shown to outperform with respect to the lowest primary criteria (Performance Parameters above Tier 0)¹ that include emission factors, energy efficiency, durability and/or safety.

Liquefied Petroleum Gas: flammable mixtures of hydrocarbon gases used as fuel in heating appliances, cooking equipment, and vehicles, typically a blend of propane and butane.

Market Aggregator: Clean Cooking Companies that are responsible for beneficiaries' mobilization and recording as well as procuring and distributing eligible stoves to eligible beneficiary households.

National Program: These are clean cooking programs funded by the Government of Rwanda, or in partnership with Development Partners, or projects funded with the recommendation of the Government of Rwanda.

Particulate matter: refers to solid and liquid aerosols, a major source of which is incomplete combustion of a fuel. Many of these particles are hazardous to human health if inhaled. PM_{2.5}

¹ Refer to Table 2.

consists of all those aerosols which have an aerodynamic diameter of less than 2.5 micrometers (microns).

Pellets: Densified biofuel made from biomass material with or without additives, usually with cylindrical form, of random length, typically 5 to 40 mm, with a diameter up to 25 mm, produced by compressing milled biomass.

Traditional cooking stove: The traditional cooking stove is an open-fire stove created by arranging three stones or a metal tripod on the floor of the cooking area.

Article 4: Rationale

The type of stove has a significant impact on the amount of fuel required for cooking and quantity of pollutants emitted in the presence of users. The quality of fuel has a similar negative or positive impact potential. The combination of the stove and fuel determines the overall emissions. The average household uses a significant volume of firewood each year to satisfy its cooking needs with low efficiency cooking stoves. In general, traditional cooking appliances waste fuel, pollute the environment and contribute to the emission of Greenhouse Gases.

To overcome these challenges, modern cooking appliances that are clean and efficient (HELE) shall be adopted to reduce biomass fuel consumption, reduce or eliminate deforestation, mitigate greenhouse gas emissions, eliminate health risks associated with inefficient cooking practices, etc.

Standards and regulations serve as tools for selecting the best appliances and fuels in order to shift from traditional low efficiency woody biomass stoves to modern, HELE cooking technologies. All appliances and fuels for cooking shall comply with the relevant national standards, international standards or any additional requirements detailed in these guidelines.

These guidelines provide clarity on the clean cooking institutional framework to guide new and existing market aggregators so as to attract investment in the clean cooking sub-sector.

CHAPTER TWO: CLEAN COOKING TECHNOLOGIES

Article 5: Minimum Quality requirements

5.1: Fuels

Fuels for clean cooking include but are not limited to biogas, solar, liquefied petroleum gas, natural gas, solid fuels such as pellets and briquettes, electricity, ethanol, methanol and gelled liquid fuels.

Charcoal and firewood are only recommended for cooking when they comply with the requirements listed below. Solid biomass fuels for clean cooking shall comply with the existing Standards for moisture content, impurities, calorific value and hazard assessment.

Table 1 specifies which Standards apply to the different fuels.

Table 1: Standards and Minimum Requirements for Clean Cooking Fuels

S/N	Type of Fuel	Standard (Test method and Minimum requirements)
1	Biogas	ISO 20675: Biogas — Biogas production, conditioning, upgrading and utilization — Terms, definitions and classification scheme
2	Pellets	RS ISO 17225-1: Solid biofuels — Fuel specifications and classes — Part 1: General requirements RS ISO 17225-2: Solid biofuels — Fuel specifications and classes — Part 2: Graded wood pellets ² RS ISO 17225-6: Solid biofuels — Fuel specifications and classes — Part 6: Graded non-woody pellets ³
3	Briquettes	RS ISO 17225-3: Solid biofuels — Fuel specifications and classes — Part 3: Graded wood briquettes ³ RS ISO 17225-7: Solid biofuels — Fuel specifications and classes — Part 7: Graded non woody briquettes ³
4	Ethanol	ISO 1338:1981, multiple parts
5	Ethanol gel	SANS 448
6	Methanol	ISO 1387:1982
7	Electricity	Meeting national supply voltage, frequency and power factor
8	Liquefied Petroleum Gas	RS 140: Liquefied Petroleum Gases (LPG) — Specification

Note: Standards may be revised; in such cases, the Standard to be applied is the current version. In case of a withdrawn Standard or a new Standard, the replaced or newly developed Standard will be considered respectively and communicated to the public. ISO and IEC Standards do not automatically apply unless ratified by the Government of Rwanda. Look for the prefix “RS”, for example RS ISO 17225-7 which may not necessarily include all provisions of ISO 17225-7.

5.2: Appliances

The performance and specification of clean cooking appliances shall comply with the existing national and or applicable international standards. The following key metrics characterize the

² Test methods are included in other Parts of ISO 17225:2021, i.e. for determination of strength, moisture, energy. This standard is currently being updated by ISO TC 238.

performance of cooking appliances: gross thermal efficiency (also called fuel efficiency), CO emissions per megajoule of energy delivered to the cooking vessel [$\text{g}/\text{MJ}_{\text{Delivered}}$], particulate matter ($\text{PM}_{2.5}$) [$\text{mg}/\text{MJ}_{\text{Delivered}}$], safety and durability. The applicable Standards and minimum performance requirements for acceptable stove-fuel combinations are not the same (See Table 2 for details).

5.3: Families of products

All domestic clean cooking appliance models must be individually certified using the locally relevant standard cooking sequence(s) and fuel(s) even if it is a member of a “family of products” as defined in IEC/TS 62257-9-8⁴. An exception is made in the case of mass-manufactured LPG and natural gas stoves with an ISO/TS 21364-1:2021 certification⁵.

Table 2: Voluntary Performance Test Parameters for Cooking Stoves

Tier	Thermal Efficiency [%]	CO Emissions (g/MJ)	PM _{2.5} Emissions (mg/MJ)	Safety score	Durability score
5	≥50	≤3.0	≤5	≥95	<10
4	≥40	≤4.4	≤62	≥86	<15
3	≥30	≤7.2	≤218	≥77	<20
2	≥20	≤11.5	≤481	≥68	<25
1	≥10	≤18.3	≤1031	≥60	<35
0	<10	>18.3	>1031	<60	>35

⁴ According to IEC/TS 62257, if one product is largely similar to another approved product, if it is “in the same product family”, it can be accepted as compliant without testing. These Guidelines specifically prohibit this type of exemption from testing save in the case of mass-manufacturer natural gas and LPG appliances because they have numerous other requirements that ensure acceptable performance.

⁵ ISO/TS 21364-1:2021 Domestic gas cooking appliances — Safety — Part 1: General requirements

Table 3: Specific standards that apply to different cooking technologies

Item	Product description	Minimum performance benchmarks		Test method	Comment
		Metric	Value		
1	Cooking stoves burning unprocessed woody and non-woody biomass fuels such as sticks ¹	Efficiency, %	≥30%	ISO 19867-1 ^{a,b}	Acceptable values until 31 December 2023 ≥20% ^g ≤11.5 ^g ≤481 ^g ≥68 ^g ≤25 ^g
	CO g/MJ _{NET}	≤7.2	ISO 19867-1 ^{a,b}		
	PM mg/MJ _{NET}	≤218	ISO 19867-1 ^{a,b}		
	Maximum firepower	≤20 kW	ISO 19867-1 ^c		
	Safety score	≥77	ISO 19867-1 ^a		
	Durability score	≤20	ISO 19867-1 ^a		
	Pictographic instructions	Pass/Fail	SANS 2233:2022 ^c		
	Labeling Requirements	Pass/Fail	ISO 19867-1 ^f		
2	Cooking stoves burning processed woody and non-woody biomass fuels such as pellets, briquettes and torrefied materials	Efficiency, %	≥30%	ISO 19867-1 ^{a,b}	
	CO g/MJ _{NET}	≤7.2	ISO 19867-1 ^{a,b}		
	PM mg/MJ _{NET}	≤218	ISO 19867-1 ^{a,b}		
	Maximum firepower	≤20 kW	ISO 19867-1 ^c		
	Safety score	≥77	ISO 19867-1 ^a		
	Durability score	≤20	ISO 19867-1 ^a		
	Pictographic instructions	Pass/Fail	SANS 2233:2022 ^c		
	Labeling Requirements	Pass/Fail	ISO 19867-1 ^f		
3	Cooking stoves burning lump charcoal and charcoal briquettes	Efficiency, %	≥30%	ISO 19867-1 ^{a,b}	
	CO g/MJ _{NET}	≤7.2	ISO 19867-1 ^{a,b}		
	PM mg/MJ _{NET}	≤218	ISO 19867-1 ^{a,b}		
	Maximum firepower	≤20 kW	ISO 19867-1 ^c		

Item	Product description	Minimum performance benchmarks		Test method	Comment
		Metric	Value		
		Safety score Durability score Pictographic instructions Labeling Requirements	≥77 ≤20 Pass/Fail Pass/Fail	ISO 19867-1 ^a ISO 19867-1 ^a SANS 2233:2022 ^c ISO 19867-1 ^f	
4	Stoves burning liquid or gel fuels	Efficiency, % CO g/MJ _{NET} PM mg/MJ _{NET} Maximum firepower Safety Durability score Pictographic instructions Labeling Requirements	≥40% ≤4.4 ≤62 ≤20 kW Pass/Fail ≤15 Pass/Fail Pass/Fail	ISO 19867-1 ^{h,b} ISO 19867-1 ^{h,b} ISO 19867-1 ^{h,b} ISO 19867-1 ^c SANS 666, SANS 1906, SANS 1243 ISO 19867-1 ^h SANS 2233:2022 ^c ISO 19867-1 ^f	
5	Stoves burning bottled or piped gas that are freestanding, built-in or table-top and are intended to be used indoors; applies to cooking stoves, working tables, ovens and similar appliances; cylinders and accessories	Efficiency, % CO g/MJ _{NET} PM mg/MJ _{NET} Maximum firepower Safety Durability score Pictographic instructions Labeling Requirements or with a valid IEC 62257	≥40% ≤4.4 ≤62 ≤20 kW Pass/Fail ≤15 Pass/Fail Pass/Fail Pass/Fail	ISO 19867-1 ^{h,b} ISO 19867-1 ^{h,b} ISO 19867-1 ^{h,b} ISO 19867-1 ^c ISO/TS 21364, ISO 23550 + ISO 25351 ⁱ ISO 19867-1 ^h SANS 2233:2022 ^c ISO 19867-1 ^f IEC 62257	

m

Item	Product description	Minimum performance benchmarks		Test method	Comment
		Metric	Value		
		that meet multiple requirements			
6	Biogas, digesters and appliances	Design and construction Portable digesters Biogas Biogas burning stoves		RS 306 RS 349 ISO 20675 <u>IS 8749</u> Indian Biogas Stove Standard	
7	Electric cooking appliances ²	Efficiency Safety Durability	≥70% Pass/Fail ≤10	CAN/CSA-C358-03 IEC 60350-1:2013, IEC 60335-2-6:2015 IEC 60335-2-6:2015	
8	Batteries supplied with cooking appliances	Safety, lithium batteries Safety, lead-acid batteries	Pass/Fail Pass/Fail	RS IEC 62133-2 and RS IEC 61960 RS IEC 60986 and RS IEC 61056	Other battery types are also present in the market – different standards may apply
9	Electric components of non-electric stoves	Electrical component safety	Pass/Fail	IEC 60335-2-6:2014	A <u>ROHS-3</u> compliance requirement may also apply

¹ RS 290:2015, Solid biomass cooking stoves — Specification is the current national standard. It was adopted prior to the promulgation of ISO 19867-1. At present both are considered

² There are multiple relevant standards: IEC 60335-1: Household and similar electrical appliances - Safety Part 1: General requirements;

IEC 60335-2-6: Household and similar electrical appliances - Safety Part 2-6: Particular requirements for stationary cooking ranges, hobs, ovens and similar appliances;

IEC 60335-2-9: Household and similar electrical appliances - Safety Part 2-9: Particular requirements for grills, toasters and similar portable Cooking appliances;

IEC 60335-2-14: Household and similar electrical appliances - Safety Part 2-14: Particular requirements for kitchen machines;

IEC 60335-2-36: Household and similar electrical appliances - Safety Part 2-36: Particular requirements for commercial electric cooking ranges, Ovens, hobs and hob elements.

^a ISO/TR 19867-3, Table 1, Tier 3

^b ISO 19867-1, Section 6.2. Only phases 1&2 are used to produce this rating

^c ISO 19867-1, Section 6.2. Only phase 1 is used to produce this rating

^d SANS 2233:2022, Section 4.3.3 for the method

^e SANS 2233:2022, Section 5.4 for the requirements

^f ISO 19867-1 Section 10. a) and subsection b) except for provisions on lines 7 and 10 which shall not appear the label.

^g ISO/TR 19867-3 Tier 2 is accepted for this class of product until June 2023.

^h ISO/TR 19867-3, Table 1, Tier 4

ⁱ ISO/TS 21364, ISO 23550, and ISO 25351, Parts 1, 21 and 22 are applied as appropriate. Applicable standards include:

RS ISO 22991: Gas cylinders — Transportable refillable welded steel cylinders for liquefied petroleum gas (LPG) — Design and construction;

RS 132: Grill for domestic LPG cylinders — Specification; (Continued)

RS 134: Low pressure Liquefied Petroleum Gas (LPG) Regulator — Specification;

RS 136-2: Liquefied petroleum gas cylinders — Part 2: Safe use of liquefied petroleum gas (LPG) in domestic dwellings — Code of practice;

RS ISO 2928: Rubber hoses and hose assemblies for Liquefied Petroleum Gas (LPG) in the liquid or gaseous phase and natural gas up to 25 bar (2.5 MPa) — Specification;

RS 138: Unified Valve for Liquefied Petroleum Gas Cylinders for Domestic Use — Specification.

Table 4: Applicable Test Methods and Minimum Requirements for Cook Stoves

Type of Technology	Standard (Test method and Minimum requirements)
Biomass cook stoves	<p>RS 290: Solid biomass cook stoves — Specification</p> <p>ISO 19867-1: Clean cook stoves and clean cooking solutions — Harmonized laboratory test protocols — Part 1: Standard test sequence for emissions and performance, safety, and durability</p> <p>ISO/TR 19867-3: Clean cook stoves and clean cooking solutions — Harmonized laboratory test protocols — Part 3: Voluntary performance targets for cook stoves based on laboratory testing</p> <p>ISO 19869: Clean cook stoves and clean cooking solutions — Field testing methods for cook stoves</p>
Liquefied Petroleum Gas Cook Stoves, Cylinders and Accessories	<p>RS ISO 22991: Gas cylinders —Transportable refillable welded steel cylinders for liquefied petroleum gas (LPG) — Design and construction.</p> <p>RS 132: Grill for domestic LPG cylinders — Specification</p> <p>RS 134: Low pressure Liquefied Petroleum Gas (LPG) Regulator — Specification</p> <p>RS 136-2: Liquefied petroleum gas cylinders — Part 2: Safe use of liquefied petroleum gas (LPG) in domestic dwellings — Code of practice</p> <p>RS ISO 2928: Rubber hoses and hose assemblies for Liquefied Petroleum Gas (LPG) in the liquid or gaseous phase and natural gas up to 25 bar (2,5 MPa) — Specification</p> <p>RS 138: Unified Valve for Liquefied Petroleum Gas Cylinders for Domestic Use — Specification</p>



<p>Electric cook stoves</p>	<p>IEC 60335-1: Household and similar electrical appliances - Safety Part 1: General requirements</p> <p>IEC 60335-2-6: Household and similar electrical appliances - Safety Part 2-6: Particular requirements for stationary cooking ranges, hobs, ovens and similar appliances</p> <p>IEC 60335-2-9: Household and similar electrical appliances - Safety Part 2-9: Particular requirements for grills, toasters and similar portable cooking appliances</p> <p>IEC 60335-2-14: Household and similar electrical appliances - Safety Part 2-14: Particular requirements for kitchen machines</p> <p>IEC 60335-2-36: Household and similar electrical appliances - Safety Part 2-36: Particular requirements for commercial electric cooking ranges, ovens, hobs and hob elements.</p>
<p>Biogas/biodigesters</p>	<p>RS 306: Domestic biogas plant — Design, construction, and operation – Code of practice</p> <p>RS 349: Domestic portable biogas — Specification</p> <p>ISO 20675: Biogas — Biogas production, conditioning, upgrading and utilization — Terms, definitions, and classification scheme</p>

Any fuel or appliance that does not comply with the relevant technical requirements of these Guidelines shall not be included in a national Clean Cooking Program.

Note: Cooking stoves burning unprocessed biomass fuels which meet Tier 2 Voluntary Performance Requirements will be considered during the transition period that extends through December 31st, 2023.

CHAPTER THREE: SHIFTING PRINCIPLES

Article 6: Clean Cooking Institutional Framework

6.1: Institutional Roles and responsibilities

This section lists the institutions involved in the clean cooking sector along with their roles and responsibilities.

The roles for institutions disseminating clean cooking solutions are:

- a. MININFRA shall coordinate the formulation and dissemination of policies and strategies related to clean cooking subsector as well as monitoring their implementation;
- b. MINECOFIN with the support of MININFRA will design smart subsidies and disincentives to discourage cooking with inefficient technologies;
- c. MINECOFIN, MININFRA and MINALOC shall mobilize funds to extend access to clean cooking technologies to low income households;
- d. MINECOFIN shall encourage financial institutions to create financing schemes that facilitate access to clean cooking technologies, to address affordability issues and upfront payment requirements;
- e. The Ministry of Environment shall establish rules and regulations for the management of the woody biomass supply chain, aimed at discouraging deforestation and promoting sustainable forest management, clean cooking fuel production and promote the use of clean cooking alternatives;
- f. Local Government through existing platforms (Inteko z'Abaturage, Umuganda, Umugoroba w'Ababyeyi etc.) shall continuously carry out awareness campaigns for use and adoption of clean cooking technologies;
- g. RDB shall put in place mechanisms that encourage investment in clean cooking technologies so as to attract private investors in production of clean cooking fuels and appliances;
- h. REMA shall support clean cooking appliance companies to identify programs that offer carbon credit purchase opportunities and support local players with certified emission reduction certificates (CERs) so as to benefit from carbon trading facilities;
- i. RSB shall develop standards for clean cooking technologies;

- j. RSB, MININFRA and REMA shall disseminate information on standards and regulations governing clean cooking technologies;
- k. RICA will enforce the implementation of quality and performance standards at import entry points which will ensure the availability of high quality cooking stoves on the market through regular quality assurance;
- l. REG shall provide technical assistance to all programs related to the dissemination of clean cooking technologies to address the clean cooking sector skills gap;
- m. REG shall provide technical support and build capacity of users to meet the safety and performance requirements for clean cooking appliances;
- n. RSB in collaboration with REG shall develop, identify and/or adopt and publish such Standards that promote clean cooking technologies;
- o. REG shall support market players to improve disseminated solutions across the tier ladder;
- p. RHA shall integrate clean cooking requirements and specifications into building requirements and the construction of new settlement programs.

6.2: Requirements to be fulfilled by clean cooking Market Aggregators

- a. Market Aggregators in the clean cooking sector with the aim of benefiting from national programs will be required to have a cooperation agreement with REG;

Note:

- i. The submission of detailed business plan, sales and dissemination action plans and sustainability plans will be a requirement for this cooperation agreement.
- ii. This requirement is not applicable to pilot programs
- b. Initiatives aimed at free distribution of cooking fuels and/or cooking stoves shall comply with standards and regulations of clean cooking technologies elaborated in these Guidelines;
- c. Beneficiary identifications for free distribution schemes shall be determined by the Ministry of Infrastructure in collaboration with the Ministry of Local Government;

- d. All Institutions are encouraged to use HELE technologies (biomass or liquid fuels with minimum performance parameters equivalent to household Tier 3 technologies or higher), and LPG or Electricity for their cooking and heating needs;
- e. All fuels and equipment for cooking shall be type approved before scaling their dissemination on the market by RSB or accredited cooking stove testing laboratories for compliance with these guidelines;
- f. To ensure proper use, basic operation and maintenance instructions should be provided to the end user in both Kinyarwanda and English, including pictographic instructions so as to ensure comprehension.

Article 7: Monitoring and Evaluation

- a. Districts shall integrate clean cooking technologies dissemination targets in their annual performance contracts (Imihigo);
- b. All producers and distributors of stoves and fuels shall register with REG and shall report their sales and dissemination on a quarterly basis;
- c. RSB, RICA and REG shall carry out market inspections and maintain a database of cooking and heating technologies (fuels and appliances) available on the market.

Article 8: Repealing provision

All prior provisions contrary to these guidelines are hereby repealed.

Article 9: Commencement

These guidelines come into force from the date of publication.

These guidelines shall be reviewed regularly to accommodate new technologies in the sector.

Done at Kigali, on **28 DEC 2022**

Dr. Ernest NSABIMANA
Minister of Infrastructure

