

KNCTS Action Plan - Draft 1

The Kenya National Cooking Transition Strategy (KNCTS) Action Plan and Investment Prospectus



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(KNCTS) Action Plan and Investment Prospectus

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Acronyms and Abbreviations

ABC-K African Biogas Component-Kenya

ACCA Accelerating Clean Cooking Action in Kenya

AGF Africa Guarantee Fund

BCC Behaviour Change Communication **BEST Biomass Energy Strategy** CCA Clean Cooking Alliance

Clean Cooking Association of Kenya **CCAK**

CCF Clean Cooking Fund

Clean Cooking Implementation Unit **CCIU**

 CO_2 Carbon dioxide CoG Council of Governors

EPRA Energy and Petroleum Regulatory Authority ESMAP Energy Sector Management Assistance Program

Global eCooking Accelerator GeCA

GHG Green House Gas

GIZ German Agency for International Cooperation **IEET** Institute of Energy and Environmental Technology

IFC International Finance Corporation

IMCCC Inter-Ministerial Committee on Clean Cooking

IKUAT Jomo Kenyatta University of Agriculture and Technology

KCFS Kenya Clean Cooking Consumer and Enterprise Financing Strategy

KEBS Kenya Bureau of Standards

KFS Kenya Forest Service

KEFRI Kenya Forest<u>ry</u> Research Institute

KII Key informant interview

KIRDI Kenya Industrial Research and Development Institute

KNBS Kenya National Bureau of Statistics

KNCTS Kenya National Cooking Transition Strategy KOSAP Kenya Off-Grid Solar Access Project KPLC Kenya Power and Lighting Company LPG Liquid petroleum gas

MoEP Ministry of Energy and Petroleum MoE. Ministry of Education

Ministry of Environment, Climate Change, and Forestry MECCF MECS Modern Energy Cooking Services

MOH Ministry of Health

MOF Ministry of Finance

NCCAP National Climate Change Action Plans **NDCS** Nationally Determined Contributions NGO Non-Governmental Organisation NITA National Industrial Training Authority OCAT Organisational capacity assessment tool

Political, Economic, Social, Technological, Legal, and Environmental framework PESTLE

RBF Results Based Financing

SERC Strathmore Energy Research Centre SNV SNV Netherlands Development Organisation

SSA Sub-Saharan Africa

SWOT Strength, weaknesses, opportunities, and threats UNCDF United Nations Capital Development Fund

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1 Introduction

1.1 Background

The Kenya National Cooking Transition Strategy (KNCTS) is the first comprehensive, cooking sector-focused blueprint that aims to transition Kenyan households and institutions from traditional polluting cooking fuels to modern, cleaner cooking fuels by 2030. Developed under the leadership of the Ministry of Energy and Petroleum (MoEP), the KNCTS is anchored in Kenya's broader development agenda, including Vision 2030, the Sustainable Development Goals (SDGs), and the country's Nationally Determined Contributions (NDCs) under the Paris Agreement.

While previous and ongoing efforts, including fuel-specific and sectoral initiatives such as the (i) LPG Growth Strategy, (ii) Bioethanol Masterplan, Biomass Energy Strategy (BEST), (iii) the Kenya ecooking strategy, (iv)_the National Knowledge Management Strategy for the Cooking Sub-Sector in Kenya, and (v) Behaviour Change Communication (BCC) Strategy, have contributed to sectoral progress, they lacked the integrated, multi-fuel, and multi-stakeholder approach encapsulated across the five KNCTS action agendas. Beyond its sectoral coherence, the KNCTS is time-bound, aiming to achieve universal access to clean cooking solutions in Kenya in the next five years.

The strategy envisions transitioning approximately 9.1 million Kenyan households (69% of the population), using traditional polluting fuels (Firewood, charcoal, and kerosene) as their primary source of energy for cooking, to clean cooking solutions. The highest proportion is in rural areas (7.4 million households) than in urban areas (1.7 million households).

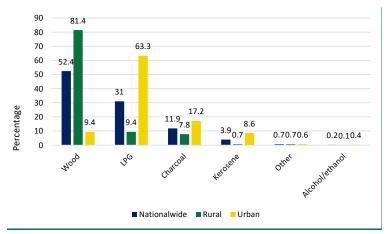


Figure 1: Main Cooking Fuel at the Household Level (Compiled with data from KNBS and ICF, 2022)

The strategy aims to achieve a diversified clean cooking energy mix comprising 50% LPG, 30% bioethanol, 10% electric cooking, and 7% sustainable biomass solutions such as briquettes and pellets by 2028, as shown in <u>Figure 1Figure 1</u> below. This optimised energy mix reflects a strategic shift toward modern, low-emission, and accessible cooking technologies for all households.

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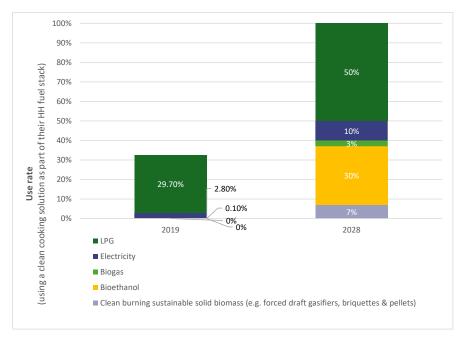


Figure 2:Composite Policy Scenario 2028

Applying the Benefits of Action to Reduce Household Air Pollution (BARHAP) tool to evaluate the full implementation of the strategy highlights the following positive impacts (i) Averting over 26,500 deaths annually from household air pollution, (ii) Saving approximately 790 hours per household annually previously spent collecting firewood, (iii) reducing greenhouse gas emissions by 16 MtCO₂e annually, equivalent to 11% of Kenya's baseline emissions, (iv)avoiding unsustainable wood harvest equivalent to 466,543 hectares, or about 11% of Kenya's forest cover and (v)generating annual social and private benefits valued at over US\$ 240 million. Additionally, local manufacturing of clean cookstoves and domestic ethanol production can significantly boost job creation and government revenue. Currently, most traditional fuels and cooking technologies are distributed through informal, untaxed channels. Transitioning to modern clean cooking solutions would formalise the market, expanding the tax base. Moreover, local fuel and stove production enhances energy security, reduces reliance on imports, and mitigates exposure to foreign exchange risksparticularly depreciation of the Kenyan shilling against the US dollar-thus contributing to economic growth. These projections make a compelling case for accelerating the transition to clean cooking solutions, not only to improve public health and environmental outcomes but also to unlock significant economic and social gains.

The Kenya National Clean Cooking Transition Strategy (KNCTS) is aligned with both national policy frameworks and international climate commitments to which Kenya is a signatory. <u>Table 1 Table 1</u> below highlights some of the frameworks that the strategy aligns with in Kenya.

Table 1: Policy and legislation alignment matrix

No	Framework	Emissions Reduction	Public Health	Energy Access	Environmental Sustainability	Institutional Coordination
1.	The Paris Agreement	✓			✓	~
2.	The Climate Change Act, 2016	✓	✓		✓	√
3.	The Draft Energy Policy 2025-2034	✓	✓	✓	✓	√
4.	The Energy Act, 2019	✓	✓	✓	✓	√
5.	The Health Act, 2017		✓		✓	✓
6.	Kenya National Adaptation Plan (NAP) 2015–2030	✓	✓	✓	✓	√
7.	Kenya Vision 2030	✓	✓	✓	✓	✓
8.	Sustainable Development Goal 7 (SDG 7)	✓	✓	✓	✓	✓

1.2 Overview of the Strategy

The Kenya National Cooking Transition Strategy details the current state of cooking, outlines barriers to clean cooking adoption, sets targets for the uptake of cleaner cooking fuels, and provides the budgetary resources required for implementation. The interventions for transitioning Kenya to clean cooking are structured within five action agendas (See <u>Figure 3Figure 3</u>) which are informed by an in-depth understanding of the market segmentation, identifying binding and contributing constraints to clean cooking adoption, and identifying ways of unlocking those bottlenecks and accelerating progress towards universal access.

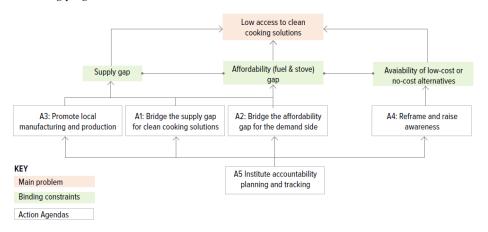


Figure 3: The KNCTS 5-point Action Agenda

The market segmentation exercise further informed the development of the five-action agenda by recognising that, while 69% of the population must transition to clean cooking, the type of intervention required varies across market segments. As illustrated in <u>Figure 4Figure 4</u>: (i) Segment Q1 requires addressing the affordability gap, (ii) Segment Q2 primarily calls for behaviour change

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and communication strategies, (iii) Segment Q3 demands interventions that address both affordability and supply constraints, and (iv) Segment Q4 needs solutions to close the supply gap.

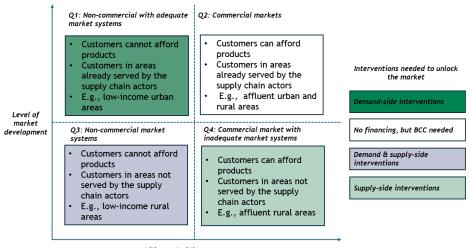


Figure 4:Market segmentation

1.3 Kenya National Cooking Transition Strategy Action Plan and Investment Prospectus

As a Strategy, the KNCTS provides the broader vision and high-level pointers of how Kenya will achieve its goal of universal access to clean cooking solutions by 2030. However, since clean cooking is a multi-sectoral and multi-stakeholder issue, actors working across the public, private, and development sectors require a structured roadmap that unifies their efforts towards the achievement of universal clean cooking access.

Therefore, the key objective of the action plan for the Kenya National Cooking Transition Strategy (KNCTS) is to provide a roadmap that guides stakeholders through the implementation phase of the Strategy's 5-point agenda by ensuring the strategic goals outlined in the KNCTS are translated into specific, actionable steps, and that the implementation of the strategy is well coordinated among the key implementing entities.

Anchored on the Action Plan, the Investment Prospectus outlines priority initiatives to actualise the KNCTS, capturing resource requirements and optimal funding mechanisms. Since Kenya's clean cooking landscape is characterised by multiple players, the Prospectus will seek to incentivise and crowd-in both public and private sector players, effectively creating ownership of the initiatives for sustained implementation.

1.4 Key Considerations in Development of the KNCTS Action Plan and Investment Prospectus

Beyond outlining the specific activities to be carried out in the implementation of the KNCTS, the Action Plan must synthesise the current social, economic, political, and legal context affecting Kenya's clean cooking landscape. Based on this understanding of the overall macro-environment, the Action Plan will then provide a roadmap that enables the efficient and timely achievement of national clean cooking targets within the present reality, in full cognisance of the external factors that might impact implementation and outcomes. As such, the following are some of the key, foundational considerations taken in the development of the Action Plan and Investment Prospectus.

1.4.1 Alignment with sector strategies and targets

To facilitate a seamless transition to modern, cleaner cooking energy sources, it is crucial for the implementation activities and timelines set out in this Action Plan to be fully aligned with other targets in other sectoral policies, strategies and global initiatives. This will enable blending of new actions with other programs that had already been initiated, even before the launch of the Kenya National Cooking Transition Strategy. Some of the key policies and strategies which the design of this Action Plan considers are outlined in <u>Table 2Table 2</u>. Depending on their scope, these policies and strategies are relevant to one or more of the five KNCTS action agendas, and hence their influence on the Action Plan is manifested under the respective action agendas to which they apply.

Table 2: A list of other strategies reviewed in the formulation of the action plan

Categories	Description
National Energy Policy (2024-2035) ¹	 Aims to achieve universal access to electricity and clean cooking by 2030. Necessitates revision of KNCTS targets and timelines from 2028 to 2030. Focuses on optimising the use of Kenya's renewable energy resources. Expands energy infrastructure to ensure reliable and affordable energy access, particularly in rural areas. Drives green industrialisation and supports economic growth through strategic investments and partnerships. Establishes a supportive policy and regulatory framework to guide the energy transition.
Liquified Petroleum Gas (LPG) Strategy	 Aims to increase LPG consumption and penetration, effectively reducing reliance on biomass fuels and lowering emissions. Outlines implementation timelines (short, mid, and long-term actions), annual budgetary requirements, and implementing institutions for various LPG initiatives. Outlines various financing models, including subsidies, microfinance loans, PayGo models, VAT exemptions (consumer financing) and results-based financing and carbon financing (supplier financing models).
Kenya National Electric Cooking Strategy ²	 Aims to facilitate the transition to electric cooking (eCooking) and the achievement of universal clean cooking access by 2028. Provides detailed costings and financing structures to attract investments in eCooking solutions, including consumer and supplier financing models.

 $^{^1\,\}text{Republic Of Kenya Ministry of Energy \& Petroleum State Department for Energy National Energy Policy 2025 -2034 Draft One. \\ \text{https://www.energy.go.ke/sites/default/files/Final%20Draft%20%20National%20Energy%20Policy%2018022025.pdf.}$

² Kenya National Electric Cooking Strategy (KNeCS) 2024 Ministry of Energy and Petroleum State Department for Energy. https://www.energy.go.ke/sites/default/files/Kenya%20National%20electric%20Cooking%20Strategy%20%20.pdf.

Behaviour Change Communication (BCC) Strategy ³	 Aims to increase awareness of the benefits of clean cooking and encourage the uptake of improved cooking solutions through ideation and branding, awareness campaigns, media advocacy, partnership building, and private sector engagement. Outlines the roles of various stakeholders and the coordination mechanisms and establishes a framework for monitoring and evaluating the effectiveness of the BCC campaigns.
National Knowledge Management Strategy for the Cooking Sub-Sector in Kenya ⁴	Seeks to mobilise and deploy knowledge for the successful social and economic transformation of the cooking sub-sector. Integrates knowledge management practices into national and county-level development planning. Facilitates effective reporting on international, regional, national, and subnational commitments.
Kenya Clean Cooking Consumer and Enterprise Financing Strategy (KCFS)	Provides a structured mechanism to address financial barriers for consumers and enterprises hindering access to clean cooking solutions. Aims to mobilise investment, incentivise financial institutions, and ensure targeted financial support for clean cooking enterprises and consumers.
Universal Access to clean cooking in Africa by IEA ⁵	 In May 2024, the International Energy Agency (IEA), together with the African Development Bank, Norway, and Tanzania, led the Summit on Clean Cooking in Africa, mobilizing US \$2.2 billion in public and private sector pledges. IEA's roadmap estimates that 80 million people per year could be reached through 2040 (a sevenfold acceleration) with technologies such as LPG, ethanol, biogas, electricity, or advanced biomass stoves.
Modern Cooking Facility for Africa ⁶	Provide 4 million Africans with access to clean cooking solutions by 2029. Kenya is one of the focus countries
Africa Development Bank Initiatives	 Sustainable Energy Fund for Africa (SEFA) – Burn Electric Cooking Expansion Program (BEEP). SEFA deployed a US \$4 million reimbursable grant as part of the Burn Electric Cooking Expansion Program, targeting Kenya, Uganda, and Zambia⁷. In May 2024 at the Paris Summit on Clean Cooking in Africa, the AfDB committed US \$2 billion over ten years to clean cooking solutions⁸.

1.4.2 Ongoing activities

The Action Plan is developed with full awareness of the ongoing activities, both by the public, private, and development sector actors, that are meant to achieve progress across the 5 action agendas. Consideration of related ongoing activities is meant to ensure consistency and continuity

³ BCC Strategy for Promoting Clean Cooking Kenya. Republic of Kenya Ministry of Energy.

https://energy.go.ke/sites/default/files/KAWI/Other%20Downloads/BCC%20Strategy%20for%20Promoting%20Clean%20Cooking%20W20Kenya(1).pdf.

⁴ The National Knowledge Management Strategy for The Cooking Sub-Sector in Kenya 2023 Ministry Of Energy And Petroleum State Department for Energy.

https://energy.go.ke/sites/default/files/Final%20 MoEP%20 Knowledge%20 Management%20 Strategy%20 with%20 signs.pdf.

⁵ International Energy Agency. (2025, July). Universal access to clean cooking in Africa: Progress update and roadmap to implementation. International Energy Agency. CC BY 4.0. https://iea.blob.core.windows.net/assets/f0170390-a39b-407e-9ffe-b1cc865d0c5d/UniversalAccesstoCleanCookinginAfrica.pdf

⁶ Modern Cooking Facility for Africa. (2025, May 13). MCFA built a strong project portfolio during 2024. Modern Cooking Facility for Africa. https://www.moderncooking.africa/mcfa-built-a-strong-project-portfolio-during-2024/

⁷ African Development Bank Group. (2025, July 22). African Development Bank's Sustainable Energy Fund for Africa (SEFA) supports electric cooking expansion across three African nations [Press release]. African Development Bank Group. Retrieved from https://afdb.africa-newsroom.com/press/african-development-banks-sustainable-energy-fund-for-africa-sefa-grant-of-4-million-funds-electric-cooking-expansion-across-three-african-nations?lang=en

⁸ African Development Bank Group. (2024, May 16). African Development Bank commits \$2 billion as it leads the way at landmark summit for access to clean cooking in Africa [Press release]. African Development Bank Group. Retrieved from https://afdb.africanewsroom.com/press/african-development-bank-commits-2-billion-as-it-leads-the-way-at-landmark-summit-for-access-to-clean-cooking-in-africa?lang=en

in sector actions, effectively leveraging ongoing progress to accelerate achievement of targets, while averting conflicts in implementation that might cause confusion and reduce momentum.

For example, the LPG Growth Strategy—an inter-agency initiative focused on expanding access to clean cooking solutions through infrastructure development, market stimulation, and policy reform—shares several objectives with the KNCTS. The strategy, whose pilot targeted 30,502 learners across seventeen (17) secondary schools and three (3) technical and vocational education and training (TVET) institutions. Accordingly, the Action Plan has been carefully aligned with the strategic pillars of the LPG Growth Strategy to reinforce coherence, streamline implementation, and facilitate access to complementary funding and technical support. Another example of projects that are in the pipeline includes the UKPACT Clean Energy Transition projects were developed based on the guidance provided by the Kenya National Clean Cooking Transition Strategy (KNCTS). Four of these projects specifically focus on cooking energy, with budgets ranging from £400,000 to £1,500,000, and a maximum allocation of £500,000 per project per financial year (April to March). The projects have durations of 12 to 22 months, with all expected to commence in August 2025.

1.4.3 Stakeholderinsights

Beyond outlining the specific activities to be carried out in the implementation of the KNCTS, the Action Plan must synthesise the current social, economic, political, and legal context affecting Kenya's clean cooking landscape. This contextual understanding was enriched through a series of key informant interviews with key stakeholders across government ministries and agencies, as well as private sector representatives, as well as validation workshops with broader sector actors.

These engagements provided nuanced insights into implementation challenges, opportunities for synergy, and institutional readiness. Based on this understanding of the macro-environment, the Action Plan provides a pragmatic roadmap that enables the efficient and timely achievement of national clean cooking targets, while remaining responsive to external factors that may influence implementation and outcomes.

1.4.4 Timeline for activities

It is imperative to organise the specific tasks assigned to implementing entities into phases. Given that the Draft Energy Policy 2025-2034 provides for a 5-year implementation period between 2025 and 2030, the timelines for the activities in the Action Plan are outlined as follows.

- Phase 1 (1–1.5 years): Consists of immediate priorities and actions that address urgent needs
 or provide foundational steps. These activities can be completed relatively quickly and with
 immediate impact.
- Phase 2 (1.5–3 years): Entails intermediate milestones that bridge short-term actions and long-term goals. Mid-term actions will require more planning and resources but are achievable within a few years.
- Phase 3 (3–5 years): Made up of visionary goals that aim for substantial impact and transformation. The long-term actions will entail complex planning, coordination, and execution over an extended period.

2 Action Plan

2.1 Action Agenda 1: Bridge the Supply Gap for Clean Cooking Solutions

Achieving universal access to clean cooking by 2030 hinges on the availability and accessibility of clean fuels and technologies across the country. Action Agenda 1—Bridging the Supply Gap—seeks to address critical bottlenecks in the clean cooking supply. This agenda builds on existing government directives, such as the 2024 presidential⁹ mandate for public schools to transition to Liquified Petroleum Gas (LPG), the Kenya Clean Cooking Delivery Unit's priority area, which is to transition institutions to clean cooking (prisons and schools)¹⁰, and aligns with Kenya's broader energy access and climate resilience goals under the Energy Act (2019), the draft National Energy Policy (2024–2035), and the National Climate Change Action Plan (NCCAP). By 2030, the agenda envisions a well-functioning, inclusive clean cooking market that reaches all citizens, including the vulnerable, last-mile populations. Specifically, this Action Agenda seeks to resolve supply constraints through the following key approaches:

i. Leveraging the Hub-and-Spoke Model to Address Supply Chain Gaps

The action agenda proposes addressing clean fuel supply chain gaps through two key approaches¹¹:

- Utilising Public Institutions as Anchors: By leveraging existing public institutions as anchor demand points, the strategy envisions establishing a hub-and-spoke model. In this model, institutions act as hubs for clean cooking energy supply, with adjacent households forming the spokes to extend fuel access. Supplier participation in the program will be determined through a transparent, competitive process. Continued participation will be conditional on providing verifiable evidence of household-level fuel distribution alongside institutional supply.
- Incentivising Distribution Expansion: Targeted incentives will be introduced to encourage stove and appliance distributors to expand their distribution networks into underserved areas. According to the market segmentation analysis of under KNCTS, all counties apart from Nairobi and Mombasa will require a supply-side incentive to reach a proportion of the population that is in non-commercial markets and commercial markets with no developed supply chains. A results-based financing approach will be implemented, under which a fixed percentage of the stove cost will be reimbursed to the supplier after sales to households have been verified.

ii. Refinement of Institutional Targeting in the Action Plan

While the initial strategy included all institutional types (educational, health, and correctional facilities), the action plan narrows the focus specifically to educational facilities. This refinement is based on several practical considerations:

Governance Simplicity: Health services are devolved to county governments, requiring
engagement with multiple local actors, which could delay implementation. In contrast, basic
education services in Kenya (primary and secondary schools, as well as tertiary institutions) are

⁹ Presidential Communication Service. (2024, May 9). Government launches school cooking gas programme. The President of the Republic of Kenya. https://www.president.go.ke/government-launches-school-cooking-gas-programme/

¹⁰ Key informant interview with a representative from the Clean Cooking Delivery UNiy

¹¹ Ministry of Energy and Petroleum. (2024). *Kenya National Clean Cooking Strategy 2020–2028*. https://energy.go.ke/wpcontent/uploads/2020/10/Kenya-Clean-Cooking-Strategy.pdf

managed by the national government, offering a more streamlined engagement process. (*Note: Pre-primary education and adult education are devolved services under the county governments.*)

- *Operational Feasibility*: Historically, collecting fuel-use data from correctional institutions has proven challenging, limiting effective planning and monitoring. With time and leveraging on the work by the delivery unit (mentioned above), the correctional institutions can be added to the implementation of the initiative. The goal is to ensure that the initiative is not delayed in creating a buy-in from these institutions.
- Proximity to Households: Educational institutions, particularly day schools, are often situated
 within or near residential areas. This increases the likelihood of reaching nearby households
 through the spokes of the model.

The section below discusses the approach to implementing the action agenda.

2.1.1 Aggregate energy consumption in educational institutions

The Ministry of Education comprises three distinct state departments, as illustrated in <u>Figure 5Figure 2</u>. Each department is responsible for a specific category of educational institutions. Engaging all three departments is essential, as each holds critical information regarding the facilities under its jurisdiction. Discussions with the State Department for Higher Education reveal that all public universities have already adopted clean cooking solutions. Additionally, several TVET institutions, secondary schools, and primary schools—particularly those situated in urban or municipal areas—have also begun implementing clean cooking technologies.

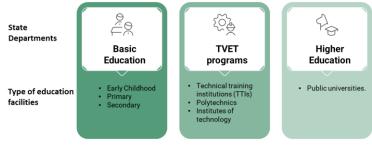


Figure 5: Departments under the Ministry of Education

The Ministry of Education (MoE) in Kenya plays a central role in policymaking, oversight, regulation, and resource allocation across all levels of the education sector¹². Owing to this mandate, the Ministry maintains access to a wide range of data, including: (i) a national registry of all schools in Kenya, (ii) classification of schools by type (e.g., boarding, day, mixed), (iii) geographic location and administrative categorisation, (iv) number of students, and (v) operational characteristics, such as whether meals are provided to students—particularly relevant for day schools. A discussion with a key informant from MoE, indicated that although they may not have the details on energy

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¹² Ministry of Education. (n.d.). Ministry of Education. https://education.go.ke/homepage

consumption, however, the Ministry can collect it and any other information needed with minimal resource outlay by leveraging existing administrative structures.

In practice, the MoE would typically initiate such a data collection exercise by issuing a circular or directive¹³ through its central office to all County Directors of Education (CDEs) and Sub-County Directors of Education. The circular would include clear guidelines and standardised data collection templates or digital survey forms. These would be distributed to school heads or Boards of Management (BoMs), who would then be responsible for completing and submitting the required information within a specified timeframe.

We propose to request the following information:

- Type of education facility (e.g., day school, boarding school) and if they cook for the students
- · Primary energy sources used for cooking
- Monthly or annual fuel consumption (e.g., LPG, firewood, charcoal, kerosene)
- Meal preparation frequency and student coverage
- · Challenges related to energy access, reliability, and cost per month
- Periods when schools are in session

Error! Reference source not found. ANNEX 1: has a data collection template. The aim is to keep it simple to reduce the non-response rate. Gathering the data from TVETS would take about three weeks. We are pursuing an interview with the Department of Basic Education, and more details will be provided in the next version of the action plan.

Data can be compiled centrally using the National Education Management Information System (NEMIS) or collected offline and digitised later by education officers. This streamlined approach would ensure broad coverage with minimal disruption, particularly given that schools already participate in regular reporting cycles for other administrative and planning purposes.

One of the key areas of support highlighted in the discussions with MoE is capacity strengthening in being able to analyse such large data sets and a platform to archive such data.

2.1.2 Group the schools into clusters

We propose two approaches to group schools into Clusters.

i. Ministry of Education Sourced data approach

This approach will leverage the data gathered in the initial activity outlined above. Specifically, it will utilise information on: (i) the number of educational facilities using polluting fuels and those using clean solutions, (ii) energy consumption per facility, and (iii) the geographical location of each facility. The data will be analysed to uncover trends and relationships, such as energy consumption patterns relative to the spatial distribution of schools. For example, areas with higher population densities are expected to have more schools within a 5 km radius, leading to larger student

¹³ Ministry of Education. (n.d.). Circulars & Guidelines. https://www.education.go.ke/circulars-guidelines

populations and, therefore, increased energy needs. Using this data, the maximum number of schools that can be supported by a single hub will be defined and the radius covered per hub. This information will assist in determining the level of energy demand that is attractive to the private sector involvement.

ii. GIS-Based Approach:

In case data aggregation described in the above step is not forthcoming, we propose exploring the use of geospatial data on school locations that can be sourced from the Africa Knowledge Platform Energy tool. Using geospatial software, schools will be grouped into clusters based on proximity and energy for cooking ratio; typically, within a 5-kilometre radius. This threshold may be adjusted based on school density and urban-rural characteristics of the area. In areas where schools are more concentrated, a smaller radius may be used to maintain manageable cluster sizes. The clustering assumes that schools within a defined geographic area tend to share similar cooking practices (including meal type), fuel types, and infrastructure conditions. This allows for standardised intervention design and collective infrastructure planning. This approach requires the MoE to have personnel who work with Geographical Information Systems.

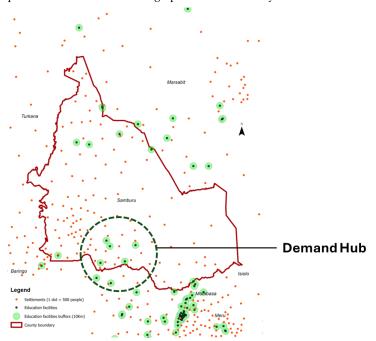


Figure 6: Example of clusters in urban and rural counties

Both approaches provide a structured framework to guide planning and ensure efficient resource allocation. The first approach is more precise, as it relies on data directly obtained from educational facilities. In contrast, the second approach is less accurate, since not all schools may be captured in the Africa Knowledge Platform Energy tool, and it necessitates making assumptions about energy consumption across different types of educational institutions.

2.1.3 Issue a policy directive for schools to transition to clean cooking solutions

Policy directives in Kenya may be issued by various authorities, including the President, Cabinet Secretaries, Principal Secretaries, Parliament, County Governors, County Assemblies, and Regulatory Bodies. While directives are useful for initiating swift action, they do not carry the force of law and may face enforcement challenges, especially if they are politically driven and lack continuity beyond the tenure of the issuing official. In contrast, regulations¹⁴ are formal legal instruments developed under an Act of Parliament, in line with the Statutory Instruments Act, 2013. They are legally enforceable and designed for long-term sustainability. In underdeveloped markets like Kenya's clean cooking energy sector, where supply is primarily driven by private sector initiative, introducing regulations too early can pose challenges. If such regulations later prove impractical or difficult to implement, amending or repealing them can be a lengthy and restrictive process due to Kenya's complex legislative and policy amendment procedures. This may hinder market growth and innovation.

Given these considerations, we propose a directive from the Cabinet Secretary for Education would promote transition to clean cooking solutions to catalyse action. A formal process will be followed as opposed to a political leader announcing a directive in a political gathering. The Ministry of Energy and Petroleum would present a request to the Ministry of Education on the need for the directive. The MoE would then communicate these directives to the schools. One key informant recommended that, for the directive to be effective, the adoption of clean cooking solutions should be included as part of their key performance indicators (KPIs). This would also enable the Ministry of Education to effectively monitor the directive's implementation through these KPIs.

It is also important to note that the president, through the State Department for Petroleum, has already issued a directive mandating all public schools to transition to LPG by 2026¹⁵. We recommend engaging with the implementing agencies to assess the status of this directive and explore collaboration opportunities. From the State Department's perspective, key benefits include expanding the LPG market by incorporating household demand and stimulating private sector involvement, particularly by offering incentives to support penetration into underserved regions and broadening the customer base.

Recognising the need for schools to maintain a consistent supply of clean cooking solutions, and acknowledging that some technologies are still in the early stages of institutional adoption, we recommend that the directive incorporate a phased approach to transitioning to clean cooking. Specifically, we propose the following provisions:

Incorporate a Pilot Phase: Introduce a pilot stage during which various clean cooking technologies (those at the nascent stage of being used in schools) are tested, monitored, and evaluated. Feedback from this phase should inform program refinement. Notably, the State Department has already piloted the transition to LPG in educational institutions, and lessons from that initiative can guide the scale-up while creating space to test additional technologies.

 $^{^{14}}$ Government of Kenya. (2010). The Constitution of Kenya, 2010. National Council for Law Reporting. $https://www.kenyalaw.org/kl/fileadmin/pdfdownloads/Constitution_of_Kenya_2010.pdf$

¹⁵ Ministry of Energy and Petroleum. (2024, December 17). Official launch of the LPG programme for public institutions of learning. https://www.petroleum.go.ke/sites/default/files/news/020DNC17122024-1.pdf

Permit Fuel Stacking During Transition: Allow schools to adopt a mixed fuel approach in the initial years. By 2028, all institutions should integrate at least one clean cooking fuel into their energy mix, with a long-term goal of transitioning to exclusive use of clean fuels by 2030.

Adopt a Phased Implementation Strategy: This approach will allow for solutions under the pilot phase to be incorporated into the initiative with time, at the same time allowing for the initiative to roll out with the already mature cooking solutions for cooking in institutions. Implementation should follow a market segmentation framework, which classifies counties into four categories based on the prevalence and absolute deficit of polluting fuel use: (i) High Prevalence – Low Deficit, (ii) High Prevalence – High Deficit, (iii) Low Prevalence – Low Deficit, and (iv) Low Prevalence – High Deficit.

We recommend beginning with counties in the High Prevalence – High Deficit group, where the number of households using polluting fuels is large. These regions are likely to benefit most from supply-side incentives to strengthen distribution networks, reach a large population and enhance private sector engagement. Once established, the program can gradually expand to the remaining county groups.

2.1.4 Develop the procurement process

The hubs established under this program will be competitively tendered, allowing private sector entities to bid for the opportunity to operate them. Only suppliers that meet predefined eligibility criteria will be allowed to participate. We recommend that the interim Clean Cooking Implementation Unit, proposed under the draft Energy Policy 2025–2035¹⁶, be tasked with defining the procurement framework. This framework should include:

Supplier Qualification Criteria: The objective is to deter opportunistic suppliers who are unlikely to remain committed during the demanding and often challenging early stages of the initiative's development. This may cover parameters such as the supplier's customer base, years of relevant experience, operational capacity (demonstrate ability to plan logistics, monitor sales for verification, etc), demonstrate a plan to ensure consistent supply of fuels to the allocated hubs and track record in clean cooking solutions.

Selection of suitable technology per hub: Another important consideration is determining the most appropriate clean cooking technology for each hub. The interim CCIU will refine the criteria to allocate which cooking solution to be allocated to which hub. Below is a recommendation to guide the allocation of cooking solutions per hub.

- **Energy Demand per Hub**: In their proposals, suppliers must demonstrate the capacity to meet the specific energy demand requirements of each hub.
- Cost Competitiveness: Each hub will have an established average expenditure for cooking
 energy. Proposed solutions that can demonstrate greater cost competitiveness relative to this
 baseline will receive higher evaluation scores.

¹⁶ Ministry of Energy and Petroleum. (2025, February 18). National Energy Policy 2025–2034 (Final Draft). https://www.energy.go.ke/sites/default/files/Final%20Draft%20%20National%20Energy%20Policy%2018022025.pdf

- Proven Practicality at School Level: Applicants must provide evidence that their proposed solution has been successfully implemented in school settings, including verifiable references. This requirement aims to reduce the risk of performance failures and maintain trust in clean cooking solutions by avoiding the premature introduction of unproven technologies in high-demand environments. Additionally, certain technologies must meet specific prerequisites to be eligible for use in a hub. For instance, deploying biogas technology requires proof that the institution can reliably source sufficient organic waste to support biogas production on-site.
- Assurance of Continuous Availability: Suppliers must guarantee an uninterrupted supply of
 both fuel and functional technology throughout the school term. For fuels dependent on seasonal
 feedstocks, applicants must show that feedstock sourcing remains stable across seasons.
 Additionally, in the event of maintenance or repairs, suppliers must ensure that school cooking
 activities continue without disruption by providing timely support.
- **Demand-Driven Approaches**: Schools should be made aware of the full range of available clean cooking technologies and encouraged to trial options that are new to them. After sufficient testing and experience, each school can then select the fuel or technology that aligns best with its operational needs and preferences.
- Infrastructure development: A significant barrier to mandating the transition of schools to clean cooking solutions is the high initial cost of infrastructure required to adopt these technologies. Notably, infrastructure setup is typically not the primary revenue stream for most clean cooking companies; their profits largely stem from ongoing fuel sales. To address this, we propose that the tendering process give preference to suppliers whose proposals include feasible financial support mechanisms, either full or partial, for assisting schools in establishing the necessary infrastructure. This will complement available funds in their annual budgets for such activities. These suppliers should enter into binding agreements with the schools, committing the institutions to purchasing fuel exclusively from the infrastructure provider for a specified period. This model not only mitigates the upfront cost challenge but also incentivises the suppliers to provide ongoing maintenance and support, ensuring that the infrastructure remains operational and that the schools continue using clean fuel, thereby fostering a sustainable market.

Recognising that some suppliers may prefer to serve institutions while others are better suited to supply households, we recommend structuring the procurement process to accommodate multiple approaches: (i) companies with the capacity to supply both schools and households may submit individual bids, and(ii) companies may form consortia tailored to their targeted end-user segment.

Rollout Strategy: The Unit should outline a clear implementation roadmap, specifying whether the program should begin with a pilot phase or proceed in stages, with well-defined timelines for supplier application, program initiation, and geographic scale-up. Some of the phases envisioned include (i) piloting of nascent cooking solutions in institutions, (ii) pilot in a county for the full implementation of the project, (iii) expanding to other selected regions phase and (iv) full-scale to all counties in Kenya.

Monitoring and Verification Mechanisms: Structured monitoring and verification cycles should be established to enable the timely disbursement of incentives based on performance and verified

connections. We propose that the CCIU engage an independent verification agent before the disbursement of incentives to suppliers to verify the reported sales by the companies.

Incentive Framework: A fixed incentive amount should be determined for each verified new household connection made by suppliers. The KOSAP programme had a 37% incentive of the total cost of the stove to suppliers for every stove sold to households. The same approach can be applied in this project.

2.1.5 Develop a Programme of Activities for aggregating carbon credits from transitioning to clean cooking in schools

The collective climate efforts for clean cooking solutions in schools can be consolidated through a Programme of Activities (PoA) or group project for carbon financing. It is estimated that 43,076 primary and secondary schools in Kenya collectively consume between 2.8 million and 6.9 million tonnes of firewood annually¹⁷. This initiative will aim to reduce emissions through the adoption of cleaner cooking technologies and attract funding to the sector.

 $^{^{17}}$ Ministry of Energy and Petroleum. (2024). Kenya National Clean Cooking Strategy 2020–2028. https://energy.go.ke/wpcontent/uploads/2020/10/Kenya-Clean-Cooking-Strategy.pdf

2.2 Action Agenda 2: Bridge the Affordability Gap for the Demand Side

The KNCTS recognises that achieving universal access to clean cooking requires the widespread availability of clean fuels and technologies to be backed by affordability for all segments of the population. Action Agenda 2—Bridging the Affordability Gap—seeks to reduce the financial barriers that prevent low-income households from adopting clean cooking solutions through various consumer-focused interventions. This agenda draws on lessons from global subsidy ^{18, 19, 20} and financing programs, and aligns with Kenya's social protection and energy access frameworks, including the Energy Act (2019), the National Social Protection Policy, and the National Energy Policy (2024–2035). The agenda aims to achieve a clean cooking market where affordability is no longer a barrier, enabling equitable access and accelerating the transition to modern energy solutions through the design of a demand-side financing program.

To address this affordability gap, a combination of strategies will be implemented:

- Mobilising co-benefit financing—including carbon credits, and outcomes linked to gender
 and health improvements—will help lower the overall cost of clean stoves across the sector.
- Providing affordable loans through financial institutions to enable staggered payments.
- Facilitating stove purchases via community-based platforms such as SACCOs, cooperatives, and village savings and loan groups.
- Offering targeted subsidies to the most vulnerable households.

While co-benefit financing will broadly reduce stove prices for the sector, the remaining three approaches focus on end-users who may still be unable to afford stoves even at reduced prices, or who may need flexible payment terms. These alternatives also serve as interim options in case of delays in accessing co-benefit funding. Subsidies will be specifically directed at households unable to afford clean cooking technologies, including those enrolled in the Kenya National Safety Nets Programme (NSNP), also known as Inua Jamii. Additionally, the program design will identify an approach to identify other needy houses not captured in the Inua Jamii, as discussed later in the report. The section below discusses the activities for Agenda 2.

2.2.1 Develop a Targeted Consumer Subsidy Programme

Subsidies aimed at reducing the initial and/or ongoing expenses associated with clean stoves and fuels have been used to enhance access to clean cooking in various countries, such as Ecuador²¹, Ghana, ²²and Indonesia²³. Despite enhancing access to clean cooking, implementation has posed

¹⁸ Aggarwal et al. 2018. Decision support system for Pradhan Mantri Ujjwala Yojana. Energy Policy, 118: 455-461

¹⁹ Gould, C.F., and Urpelain, J. (2018). LPG as a clean cooking fuel: Adoption, use, and impact in rural India

²⁰ Asante, K, P., Afari -Asiedu, S., Abdulai, M, A., Dalaba, M, A., Carrion, D., Dickinson, K, L., Abeka, A, N., Sarpong, K. and Jack, D, W. (2018). Ghana's rural liquified petroleum gas program scale up: case study. https://doi.org/10.1016/j.esd.2018.06.010

²¹ Figari, A & Gómez, X. (2015). Promoting Induction cooking in Ecuador. Good practices Analysis 2.0 on INDCs, LEDS, NAMAs and MRV

²² Asante, K, P., Afari -Asiedu, S., Abdulai, M, A., Dalaba, M, A., Carrion, D., Dickinson, K, L., Abeka, A, N., Sarpong, K. and Jack, D, W. (2018). Ghana's rural liquified petroleum gas program scale up: case study. https://doi.org/10.1016/j.esd.2018.06.010
²³ PERTAMINA (Persero), Indonesia & the WLPGA, & France. (2015). Kerosene to LP Gas Conversion Programme in Indonesia: A

²³ PERTAMINA (Persero), Indonesia & the WLPGA, & France. (2015). Kerosene to LP Gas Conversion Programme in Indonesia: A Case Study of Domestic Energy.

several challenges, including: (i) diversion of funds intended for impoverished households to nondeserving households, (ii) financial strain on the government, and (iii) strong political support that subsidies receive from the beneficiaries, which makes phasing them out difficult. Therefore, the structuring of demand-side subsidies is critical to ensuring their impact, as discussed under the subcomponents of the subsidy program.

The demand-side subsidies are deemed essential for addressing the affordability challenge of clean cooking solutions in Kenya, especially for the low-income groups in both urban and rural areas in Kenya. Given the low willingness to pay for electric LPG cookstoves²⁴Subsidising the price of the stove is proposed to incentivise consumers to acquire these cookstoves. As such, developing a targeted subsidy programme aimed at enhancing access to clean cooking by the low-income groups that cannot afford the clean cooking solutions at retail market price, even with developed supply chains in both urban and rural areas. The following activities will be determined in the design of the subsidy component of the demand-side financing program.

i. Identification of beneficiary households

- Households in Kenya National Safety Nets Programme (NSNP): To achieve this objective, we
 propose a targeted approach to the system of identifying eligible households. The programme
 can leverage the databases from the Ministry of Labour and Social Protection and the Ministry
 of Devolution and ASAL to identify eligible households that qualify for the subsidy. These
 would be households captured in the Kenya National Safety Nets Programme (NSNP).
- Identify households not covered under the NSNP: The programme can adopt the model applied by the Gas Yetu Programme, which was piloted in Kajiado, to enhance access to LPG to implement the subsidy programme. This included liaising with the local administration at the grassroot levels whereby i) registration booklets were provided by National Oil to facilitate registration of beneficiaries, ii) beneficiaries presenting themselves with their national identity cards for registration and iii) beneficiaries presenting themselves with their identification cards and registration forms at the distribution centres for collection of their LPG cylinder upon payment of KES 2,000. The program can build on the criteria applied by the Gas Yetu programme to confirm that the household is from a low-income group. This can be complemented with approaches under Kenya's health sector in identifying needy households. For example, Kenya's Social Health Authority (SHA) identifies low-income households eligible for subsidies and support primarily through a means-testing approach and proxy-criteria assessments, drawing on best practices from the country's previous indigent programs. The proxy means test evaluates household socio-economic characteristics, such as housing quality, access to services, family size, and assets, to determine the ability to pay.

ii. Determining the subsidy level

The subsidy amount should be carefully calibrated to match the actual needs, ensuring it is neither excessive nor insufficient. Over-subsidising can distort the market, while under-subsidising may reduce the effectiveness of the intervention. To assess households' ability to pay, a proxy means test can be used, which considers socio-economic indicators such as housing conditions, service access,

 $^{^{24}}$ GoK (2024). Kenya National Cooking Transition Strategy 2024-2028

household size, and asset ownership. Subject to funding availability, a survey may also be conducted to gauge the willingness of low-income households to pay for clean cooking stoves.

iii. Define the delivery channel for the subsidy

The subsidy can be delivered either through private companies, who are required to lower prices for end-users, or directly to beneficiaries in the form of cash or vouchers. Regardless of the delivery method, beneficiaries should receive the full value of the subsidy. However, ensuring transparency and maintaining quality standards is essential in both approaches. For example, households must demonstrate that they used the voucher to purchase the stove, and companies must demonstrate that the subsidy is passed to the end-users.

iv. Establish a verification system

The verification process assesses that the subsidy reached the target households. The household did not obtain multiple stoves under the program or resell the stove.

2.2.2 Consumer Financing from Financial Institutions

Consumer financing plays a critical role in enhancing access to clean cooking in Kenya by enabling households to overcome the high upfront costs of clean cooking technologies through affordable, flexible payment options. By leveraging models such as government-backed consumer guarantee schemes, Kenya can make enormous strides in enhancing access to clean cooking by 2030. These guaranteed schemes have the potential to accelerate access to clean cooking solutions by mitigating the financial risks faced by lenders. In Kenya, some banking institutions have developed loan products for cooking solutions. For example, Equity Bank has a clean cooking loan that consumers can access to purchase improved stoves and LPG accessories. The program has a repayment period of 12 months, with a monthly interest of 1% and consumers can pay KES 15 per day²⁵. Equity also partnered with development organisations for a results-based financing (RBF) programme, the proceeds of which are reinvested in the clean energy agenda. KWFT is another financial institution that has benefited from a results-based approach to distribute cooking solutions through the KOSAP RBF program²⁶. Some financial institutions are hesitant to provide loans for clean cooking appliances due to perceived high default rates and limited collateral among low-income households.

To address this challenge and encourage financial institutions to venture into the clean cooking space by offering credit to consumers and entrepreneurs, the program design will explore the following avenues.

- Map out and identify key lessons from financing institutions that have provided loans for clean cooking and provide recommendations on scaling a loan product for energy solutions.
- Formulate de-risking mechanisms for lending institutions to participate in providing or scaling up clean energy product loans. For example, a government/donor-supported credit guarantee facility in partnership with development partners would be critical in partially covering potential losses incurred by lenders. The government guarantee scheme would be the

²⁵ Equity Group Holdings. (2019). Equity News: Issue 15. Equity Group Holdings. Retrieved July 19, 2025, from https://equitygroupholdings.com/ke/media/uploads/Equity-News-Issue-15.pdf

²⁶ Kenya Women Microfinance Bank PLC. (n.d.). Partnership projects. Retrieved July 19, 2025, from https://kwftbank.com/partnership-projects/#1719396152778-95a51c95-573b

National Treasury, supported by development partners and financial institutions, with oversight from the Ministry of Finance. Approaches such as RBF can be tools that can be applied in engaging these financial institutions.

2.2.3 Leverage Community-Based Savings and Credit Groups

Leveraging self-managed community-based savings and credit groups, especially among rural and low-income communities, provides an avenue for financing clean cooking solutions such as LPG, electric pressure cookers, and ethanol stoves. Over the years, savings and credit cooperative societies (SACCOs) and community groups such as women's groups have established trust and savings systems that can be plugged into to provide flexible financing for clean cooking solutions. For instance, the Village Savings and Loans (VSLs) can act as entry points for financing clean cooking technologies where members use group savings to buy clean cookstoves. These entities can pool finances together and do bulk purchases, enabling better pricing for the technologies. They can offer low-interest loans to members, offer group guarantees or revolving funds to spread the cost of clean cooking solutions, thus reducing the burden of upfront costs. Integrating the PAYGO models into the community savings structures can enable the members to repay the clean cooking technologies in small, manageable instalments. Stakeholders such as non-governmental organisations, private companies, and government agencies can use the VSLs for distribution, training or PAYGo repayment support. The program design will outline strategies for identifying savings groups that suppliers can partner with to distribute cooking solutions through a repayment model. One potential strategy involves collaborating with community health workers under the Ministry of Health, who have direct access to households at the grassroots level. To minimise the risk of default, a layaway system could be implemented, whereby group members make regular monthly contributions toward the cost of a stove, and the product is only delivered to the individual once full payment has been made

2.2.4 Leverage Funding from the co-benefits of transitioning to clean cooking

Funding from the co-benefits²⁷ of transitioning to clean cooking (carbon financing, gender, and health outcomes) has the potential to cushion low-income households from the high upfront costs of clean cooking solutions. Project developers can achieve this by registering the clean cookstove projects under carbon projects, thereby quantifying CO₂ and black carbon emission reductions and the revenue generated used to subsidise the clean cooking solutions, making them more affordable for low-income households in urban and rural areas. The Ministry of Environment, Climate Change and Forestry has made significant progress in establishing an enabling environment for carbon finance through the development of the National Carbon Registry under the Climate Change Act-(The Climate Change -Carbon Markets - Regulations) 2024²⁸. The registry aims to enhance transparency in carbon trading, track issuance, transfer, and retirement of carbon credits generated within Kenya, and align national carbon trading with Article 6 of the Paris Agreement. This positions Kenya to attract more international buyers. Article 6 of the Paris Agreement and specifically Article 6.2 allows nations to engage in voluntary collaboration to meet the emission reduction targets

²⁷ International Finance Corporation. (2023). Clean Impact Bond: Mobilizing Finance for Clean Cooking. IFC. https://www.ifc.org/content/dam/ifc/doc/2023-delta/ifc-clean-impact-bond-052023.pdf

through the transfer of Internationally Transferred Mitigation Outcomes (ITMOs). This mechanism enables one or more countries to transfer carbon credits earned from greenhouse gas reductions to help others achieve their climate commitments²⁹, as has been the case with Ghana, which has signed an agreement for the sale of ITMOs under the Paris Agreement, partnering with Switzerland to implement its carbon projects ^{30, 31}. Co-benefit outcomes such as health (averted ill-health and mortality and gender outcomes (e.g., time saving) can be calculated using tools such as BARHAP, experiments and household surveys. The specific activity under the activity will be to identify challenges faced by the project developer for accessing funding from the co-benefits of transitioning to clean cooking. For example, technical support can be provided to local companies to register carbon projects and connect them to outcome buyers as discussed below.

2.3 Technical Assistance for Local Companies

2.3.1 Support local companies to register carbon projects

Since the setting up of the National Carbon Registry under the Ministry of Environment and hosted by the National Environment and Management Authority (NEMA), there have been some efforts in the registration of clean cooking projects. The 2024 Carbon Markets Regulations require that all ongoing carbon projects align with the new regulations. However, project proponents often face capacity challenges, leading to non-registration or a long process before their projects are registered. A discussion with NEMA indicates that a high percentage of applicants are from the cooking sector. Still, they have yet to approve any of the applications due to the back and forth in ensuring that the documents required for approval have been correctly filled out.

To enhance the registration of these clean cooking projects, technical assistance programmes must be designed specifically to support local clean cooking companies in registering their projects. With technical support, clean cooking solution manufacturers are expected to unlock new revenue streams, attract climate finance, and scale up production to meet the growing demand, thereby accelerating access to affordable, clean cooking solutions while contributing to Kenya's Nationally Determined Contributions (NDCs) and the achievement of Kenya's clean cooking goals by 2030. This support will include:

- Supporting enterprises prepare key documentation such as a detailed Project Design Document (PDD), baseline emissions analysis, Monitoring, Reporting and Verification (MRV) plans, and evidence of stakeholder consultation and environmental safeguards.
- Facilitating their engagement with authorised validation and verification bodies, ensuring adherence to approved methodologies, and navigating approval by the Designated National Authority (DNA), which is the National Environment Management Authority (NEMA).

This capacity-building effort will not only enable local companies to access voluntary or compliance carbon markets but also ensure the integrity and traceability of emission reductions linked to

²⁹ World Bank. (2022). What you need to know about article 6 of the Paris Agreement.

 $[\]underline{https://www.worldbank.org/en/news/feature/2022/05/17/what-you-need-to-know-about-article-6-of-the-paris-agreement}$

https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/energy-transition/022924-switzerland-ghana-approve-transfer-of-article-6-credits-from-cookstove-project

approve-transfer-of-article-6-credits-from-cookstove-project

31 Ghana authorises transfer of mitigation outcomes to Switzerland. https://ghana.un.org/en/207341-ghana-authorizes-transfer-mitigation-outcomes-switzerland

Kenya's national climate accounting system, while also enhancing the affordability of clean cooking solutions for many households in the country.

2.4 Action Agenda 3: Promote Local Manufacturing and Fuel Production for Local Use and Export

Beyond expanding distribution networks and ensuring affordability, Kenya must also strengthen domestic production of clean fuels and cooking technologies. Action Agenda 3—Promoting Local Manufacturing and Clean Fuel Production—seeks to catalyse investment in local manufacturing, establish bioethanol production hubs, and enhance the capacity of small and medium enterprises (SMEs) across the clean cooking value chain. This agenda aims to reduce reliance on imports, lower production costs, and create green jobs through industrial development, while adopting the cooperative society model as is applied commonly in the tea and coffee sectors in Kenya.

Action Agenda 3 builds on the Kenya Ethanol Cooking Fuel Master Plan (2021), the Special Economic Zones Act (2015), and the National Energy Policy (2024–2035), which collectively promote industrialisation, local value addition, and access to clean energy. This action agenda will also benefit from the recently launched initiative under UKPACT, which focuses on strengthening local manufacturing and promoting energy crop cultivation to bolster clean cooking supply chains. The initiative is designed to support the private sector, the Ministry of Energy and Petroleum (MoEP), and the Clean Cooking Association of Kenya (CCAK). Key components of this work include (i) establishing a comprehensive baseline of stove and fuel production in Kenya, capturing an inventory of manufacturers, current production volumes, and existing gaps; (ii) delivering practical training for local manufacturers that covers technical capacity, financial management, compliance with international standards, and strategies for market access; and advancing efforts to support the domestic production of clean cooking fuels³². By 2030, the agenda envisions a thriving local manufacturing ecosystem that supports innovation, ensures quality, and delivers affordable, clean cooking solutions to Kenyan households.

2.4.1 Establish Ethanol Hubs and Manufacturing Clusters

Establish Out-grower Schemes and Aggregation Centres for Smallholder Farmers for Fuel Production

Globally, sugarcane is most often used for ethanol production. However, many other varieties of feedstock can be used to produce ethanol for cooking fuel, including corn, cassava, sorghum, etc. In Kenya, ethanol is exclusively produced through molasses feedstock, a by-product of sugarcane production. The levels of production have, however, been low due to a shortage of molasses. To address this challenge, other potential feedstocks for the production of ethanol for cooking are sugarcane juice and cassava³³. Sustainable production of ethanol relies on the availability of feedstock. As such, increasing investments in sugarcane and cassava development and land

³³ GoK. (2021). Kenya Ethanol Cooking Fuel Masterplan.

³² The assignment is yet to commence and we are yet to engage with the company selected to implement the assignment.

allocated for feedstock production in high-yield areas such as Western and the coastal regions, will be necessary to meet the potential demand for ethanol³⁴.

A study conducted in Tanzania³⁵ on growing of cassava for ethanol indicates that the inclusion of out growers in the production of feedstock is a viable alternative and can provide income generation opportunities for smallholder farmers. Results also indicate that ethanol from cassava is more cost-effective compared to production from sun-dried chips. However, if the feedstock is to be supplied by out growers, sundried cassava chips may be a more viable option than the use of fresh cassava can potentially be hindered by inadequate transportation infrastructure in rural areas.

Therefore, to increase biofuel potential and cassava yields as a feedstock for fuel production, there is a need to establish feedstock aggregation centres that are operated through organised systems such as cooperative societies. The aim is to adopt similar approaches used by cooperative societies among tea and coffee farmers in Kenya. These aggregation centres act as collection hubs, thereby reducing transportation costs for farmers, minimising feedstock loss, and enabling the quality assurance of the feedstock.

Efforts led by the government (Ministry of Agriculture, Ministry of Cooperatives Development) and potential investors need to reach out to small-scale farmers and out-grower producers. With coordinated investment, institutional support, and strong fuel producer-farmer linkages, the outgrower model can be a useful tool for catalysing inclusive green growth, helping the country achieve its 2030 clean cooking target while also achieving climate goals. However, to achieve this, there is a need to develop the skills of the farmers, and technical assistance is provided to maximise cassava yields. In addition, better access to on-farm technology through the use of improved varieties, access to training, irrigation, and inputs, among others, could be the means to enhancing cassava productivity, therefore, reducing biofuel production costs³⁶. Giraffe Bioenergy has made strides in enhancing access to improved varieties of cassava seedlings by collaborating with IITA (International Institute of Tropical Agriculture) and has developed clean seedling varieties and currently holds the largest certified clean cassava seedling nursery in Kenya, with the potential to catalyse large-scale cassava production for both food and energy. Giraffe Bioenergy has also developed a rapid cassava multiplication method using lab-based propagation techniques, and therefore, instead of waiting a year to grow cassava and cut it into sticks for propagation, they have created a seedling system that allows for faster scaling. In Kenya, this approach would help solve the problems encountered in the cassava value chain, which include a lack of seedlings and, lack of real investment in cassava as a cash crop, unlike in West Africa, Uganda, or Tanzania. In addition, varieties available are often susceptible to diseases.

i. **Setting up the cooperatives**: The cooperative societies will be set up in regions with high potential for feedstock availability, as indicated in <u>Table 3Table 7</u>. In each of the regions, a

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³⁴ GoK. (2021). Kenya Ethanol Cooking Fuel Masterplan

³⁵ Felix, E., Cardona, C, A. and Quintero, J, A. (2007). Technical and economic viability of biofuel value chains. Chapter 5 in Bioenergy and food security. Biofuels, Agriculture and Poverty Reduction. Overseas Development Institute in Natural Resources Perspective volume 107

³⁶ Felix, E., Cardona, C, A. and Quintero, J, A. (2007). Technical and economic viability of biofuel value chains. Chapter 5 in Bioenergy and food security. Biofuels, Agriculture and Poverty Reduction. Overseas Development Institute in Natural Resources Perspective volume 107.

phased approach can be applied in setting up the cooperatives, starting with 3-5 cooperatives, with targeted gradual scaling out.

Table 33: Biomass feedstock production areas 37, 38

#	Biomass type	Biomass Source Counties
1	Cassava growing	Kisumu (Nyando, Nyakach), Busia (Teso south, Nambale, Butula),
		Trans Nzoia, Kilifi (Ganze, Kaloleni, Mahgarini), Kwale Siaya
		(Ugunja, Alego Usonga, Gem), Homabay
2	Sugarcane growing	Kisumu (Muhoroni, Nyando), Kakamega (Mumias, Butere,
		Malava), Busia (Nambale, Teso north), Homa Bay (Ndiwa),
		Migori (Awendo), Narok (Trans Mara, Kilgoris)

- ii. Management of the cooperatives: To ensure sustainability, the cooperatives will be required to formalise their registration under the Cooperatives Societies Act. In addition, they will be required to have a board of management in place to oversee the performance and ensure compliance. The daily operations of the cooperative will be run by a qualified team, including a manager, a supervisor, and a finance officer.
- iii. Member recruitment: A criterion for recruiting members of the cooperative society includes:
 - a. Those with access to biomass feedstock, e.g., sugarcane.
 - b. Commitment to supply feedstock or work in the processing of the biomass
 - c. Payment of the membership fee as stipulated in the constitution
- iv. Member role: The bona fide members will be required to supply raw materials (biomass, crop waste) and participate in the operation of the cooperative, including production of the fuels, packaging, sales, and distribution.

The cooperatives will work collaboratively with sugar millers, rice millers, county departments of agriculture and energy, NEMA (for licensing and compliance), KEBS for quality standards, and development partners for technical support, financing, and capacity building.

ii. Establish block Farms for Biofuel Production

In addition to the out-grower model, we propose the adoption of a block farmer model, which is a structured and semi-centralised approach to feedstock production, ensuring control, efficiency, and accountability in feedstock development. This model enables investors to lease or purchase large tracts of land in suitable biofuel-growing areas in the country. With this approach, the land can be subdivided into blocks and assigned to individual farmers or farmer groups, who cultivate the biofuel crops such as cassava under agreed terms. Unlike the out-grower model, the block farmer model i) ensures oversight of the farm operations and inputs, ii) centralises risk management such as such as those associated with climate variability, diseases, and pests, iii) ensures water access, which is key for the growth of the cassava all year round, and iv) maintains quality control therefore ensuring availability of feedstock all year round. This approach is being applied by Giraffe Bioenergy in growing cassava in the coastal region for the production of bioethanol. Following the pilot, Giraffe Bioenergy has proven that cassava can grow well in Kilifi's agroclimatic zone and is therefore scaling to 2,000 hectares through the block systems.

³⁷ GoK. (2021). Kenya Ethanol Cooking Fuel Masterplan

³⁸ KALRO Crop/ Livestock/ Pasture Selector

To scale out the block farming model to other parts of the country, the action plan proposes a blended approach incorporating i) Public public-private partnership model, or ii) public tendering, especially where the government has public land, e.g., Agricultural Development Corporation (ADC) lands

- a. Public-private partnership block farming: This model encourages partnership between investors and farmers in the target regions. In this approach, the investors are encouraged to lease land in the viable bioenergy counties as indicated in <u>Table 3Table 7</u>, and manage operations while farmers benefit from wages. The Ministry of Energy and Petroleum and the County governments are expected to:
 - Guide the negotiations between investors and farmers to align expectations and protect local community interests.
 - ii. Standardise contracts indicating the roles and responsibilities of the farmers, investors, and pricing mechanisms to ensure fair returns to farmers.
- b. Public tendering model: The government, through its agencies such as the Agricultural Development Cooperation (ADC), National Irrigation Board (NIB), Ministry of Agriculture, will be required to identify and document the public land in the target counties outlined in <u>Table 3Table 7</u>, including documenting their size, infrastructure available, and potential constraints of utilising the land. The Ministry of Energy and Petroleum will be required to:
 - Design a framework guiding the block farming, such as designing the lease terms, and ensure compliance with the regulations, such as compliance with environmental impact assessment and land use
 - ii. Issue public notification of the tender,
 - iii. Evaluate submitted bids
 - Screen investors to ensure they meet they meet the minimum eligibility requirements
 - v. Conduct site visits and
 - vi. Award the contracts to successful bidders.

The criteria for bidders shall include:

- Demonstrated financial capacity with proof of audited financial statements indicating at least KES 50 million and proof of access to credit,
- ii. Compliance with statutory requirements and environmental safeguards as per the requirements set by the National Environment Management Authority (NEMA)

This approach will require collaboration with the County governments and the Ministry of Agriculture to identify the viable blocks within the target counties, as elaborated in <u>Table 3Table 7</u>.

iii. Establish Centralised Clean Cooking Production Centres

To support the value chain, the establishment of centralised production centres, such as through cooperative societies, presents a strategic opportunity to build a vibrant and sustainable clean cooking ecosystem in Kenya. These will serve as centralised zones that bring together various components of the clean cooking value chain, including feedstock production, fuel production, stove production, packaging, quality control, and distribution within a coordinated framework.

Establishment of the cooperatives for clean cooking solutions, such as bioethanol, clean-burning, sustainable solid biomass (e.g. forced draft gasifiers, briquettes & pellets), assembly of electric stoves, has the potential to create better value chains by creating economies of scale, thus reducing production and logistical costs, enhancing efficiency, and quality assurance across the sector.

For the cooperatives to operate optimally and contribute significantly to the clean cooking sector, it is crucial that the government of Kenya provides its support through infrastructural development and enhancing public-private partnerships. As per the Kenya Ethanol Cooking Fuel Masterplan, between 2 to 7 ethanol plants (distilleries) are required across select counties such as Kisumu, Busia, Trans Nzoia, Kilifi, or Kwale counties since counties are considered the most conducive due to the proximity to feedstock³⁹.

iv. Promotion of Standardisation of Improved Biomass Stoves

The action plan proposes the enhancement of the quality, safety, performance, and market confidence in improved biomass stoves by ensuring standardisation of the biomass stoves so as to comply with the Kenya biomass stove standard (KS 1814:2019). The action plan proposes the adoption and enforcement of technical standards that define the minimum efficiency, emission, and durability standards for improved cookstoves through collaboration with standards bodies such as Kenya Bureau of Standards (KEBS). Standardisation efforts will cover not only overall stove efficiency and emissions performance but also critical components such as combustion chamber liners and external cladding materials, which significantly influence stove durability, heat retention, and user safety. The aim is to ensure reliability across locally manufactured biomass cookstoves. Standardisation will be crucial in formalising the market, protecting consumers, and promoting wider adoption of clean and safe cooking technologies. To achieve this, collaboration between KEBS, testing institutions such as the Clean Cookstoves Testing and Knowledge Centre (CCTKC) and the University of Nairobi, and local manufacturers will be crucial to strengthening quality assurance systems, establishing labelling schemes, and building manufacturer capacity for compliance. Additionally, locally produced stoves that meet the standard can be advertised on the various awareness creation campaigns or on the MoEP's website to create incentives for the companies to meet the standard.

v. Promotion of Local Assembly for Modern Cook Stoves, Such as Electric Cooking Appliances

In addition to the standardisation of the improved biomass cookstoves, local assembly of modern cooking solutions such as electric pressure cookers and induction cookstoves is key in providing a strategic opportunity for Kenya to accelerate its clean cooking targets. Promoting local assembly facilities, as is also proposed by the Kenya National Electric Cooking Strategy⁴⁰, presents the potential to reduce production and importation costs, shorten supply chains, and reduce lead times, thereby improving the availability of affordable appliances. To achieve the objective of local assembly, collaborations and partnerships will be key between the Kenyan manufacturers or cookstove designers and international manufacturers (China, India, Japan, etc) to facilitate technology transfer while adhering to safety and performance standards. The involvement of the Kenya Bureau of Standards will be crucial in ensuring compliance with the standards and

³⁹ GoK. (2021). Kenya Ethanol Cooking Fuel Masterplan

 $^{^{\}rm 40}$ GoK. (2024). Kenya National Electric Cooking Strategy.

streamlining of certification process for locally assembled products. This component will also benefit from the hands-on technical training for artisans and related community-based organisations (CBOs) on clean cooking technologies, including stove design, installation, maintenance, and repair for both small-scale and large-scale technologies under the UKPACT project running for two years starting in August of 2025.

2.4.2 Advocate for Policy and Regulatory Reforms

i. Introduce Tax Incentives for Machinery, Input, and Components Used in The Local Manufacturing of Clean Cookstoves

Providing tax rebates to fuel producers that source directly from Kenyan farmers⁴¹ is an incentive to catalyse the expansion of the clean cooking industry. The feedstock production of both sugarcane and cassava for fuel production presents an opportunity to create new jobs and increase income, with a focus on small-holder farmers, while enhancing access to clean cooking solutions, thus contributing to Kenya's clean cooking agenda. To enhance cassava and sugarcane cultivation for fuel production, the Kenyan government must incentivise fuel producers to source their feedstock from Kenyan farmers through tax rebates⁴². The targeted tax rebates for feedstock cultivation should target machinery, feedstock production inputs. In addition, the tax rebates should also be provided for the various components used in the local production of clean cooking technologies. This will ensure that the production costs for these technologies are reduced, thus enhancing access to clean cooking solutions to a wider population.

ii. Facilitate access to SEZ incentives Such as Tax Breaks, Duty Exemptions for Clean Cooking Enterprises

The Special Economic Zones Act 2015 provides for the establishment of Special Economic Zones (SEZ) in Kenya. Licensed entities under the SEZA will be able to benefit from tax incentives, which include income tax exemptions, value-added tax exemptions, customs and excise exemptions, and work permit quotas, amongst others⁴³. These incentives are aimed at promoting investment, industrial growth, and export-oriented production. Facilitating access to SEZ incentives for clean cooking fuels and related technologies can significantly lower the production and distribution costs, making the solutions more affordable and accessible to Kenyan households. By designating clean cooking value chains actors as eligible SEZ enterprises or facilitating their location within the SEZ, the government can attract private investment, encourage local manufacturing, and ultimately lead to the reduction of end-user prices. As per the Act, companies that can benefit from the SEZs are those that are:

- a. Incorporated in Kenya to undertake special economic zone activities
- b. Propose to engage in any activity eligible to be undertaken by a special economic zone enterprise in the SEZ zone
- c. Conducts business in accordance with the laws

To qualify, enterprises will be required to follow the steps outlined below:

 $^{^{41}}$ GoK. (2021). Kenya Ethanol Cooking Fuel Masterplan

⁴² GoK. (2021). Kenya Ethanol Cooking Fuel Masterplan

⁴³ Okello. S., Shah., Kabochi., J. et at., (2015). Tax Alert. The Special Economic Zones Act. PwC

- a. Step 1: Submitting a letter of interest and SEZ investment project proposal form
- b. *Step 2:* Once the proposal is approved, the entrepreneur will submit a duly filled SEZ enterprise application form and the supporting documentation
- c. Step 3: Once the application is approved, the authority will issue an Approval in Principle Letter guiding the conditions to be fulfilled to sanction the issuance of an SEZ licence. The conditions may include the incorporation of an SEZ company and submission of a certificate of incorporation, KRA PIN of the newly incorporated SEZ company, submission of the National Environment Management Authority (NEMA) permit, submission of a detailed land use plan, application for land allocation, and obtaining a lease and payment of SEZA licence fees, which is USD 1,000
- d. Step 4: Incorporation of the enterprise will be done by the Registrar of Companies
- e. Step 5: Submission of the payment receipt and incorporation documents to SEZA
- f. Step 6: Obtain the SEZ enterprise licence

However, not all clean cooking enterprises will be set up within the SEZ, especially small-scale fuel and cookstove producers and distributors.

iii. Enforce Fuel and Cookstove Quality Standards

The Kenya Bureau of Standards (KEBS), in collaboration with the Energy and Petroleum Regulatory Authority (EPRA), plays a central role in developing, approving, and enforcing standards (<u>Table 4Table 8</u>) for both cooking fuels and appliances. It is critical to enforce the fuel and cookstove quality standards to ensure consumer safety, environmental protection, and the credibility of clean cooking solutions in Kenya.

Table 4: Examples of standards for cooking solutions

	Categories	Description	
1	KS 2759:2018	Specification for Ethanol Fuelled Cooking Appliances	Outlines the requirements for the design, safety, performance, and labelling of ethanol fuelled cooking appliances intended for household use
2	KS 2859:2020	Ethanol fuels for domestic use—specification	Provides the basis for regulating production and imports
3	KS 1814:2019	Biomass stoves – performance requirements	Defines the biomass stove performance for firewood and charcoal, for domestic and institutional stoves. It stipulates the minimum performance standards of stoves in terms of thermal efficiency, emissions (both carbon monoxide and particulate matter PM10), durability, and safety.
4	KS 291- 2020	Charcoal and carbonized briquette standards (2020) -for solid biofuel -sustainable charcoal and carbonized briquettes	Outlines the quality requirements for KEBS certification of charcoal and carbonized briquettes traded in the market.
5	KS IEC 60350- 2:2017	Kenya Standard — Household electric cooking appliances	Defines methods for measuring the performance of electric hobs for household use. However, they have been overtaken by events due to the invention of induction cookers and electric pressure cookers that require different testing criteria. Hence, there is a need to update them to reflect the current reality.
6	KS 2520 – 2014	Domestic biogas stove specification	Provides detailed requirements for the construction, operation, safety, and methods of test for stoves intended for use with domestic biogas as a fuel source

7	KS2968:2022	Specification Meter for	The purpose of this meter is to accurately dispense
		dispensing liquefied petroleum	controlled quantities of liquefied petroleum gas (LPG) from
		gas (LPG) from cylinders	cylinders
		specification	

As the demand for bioethanol and ethanol stoves grows, there is an urgent need to regulate the market to prevent the proliferation of substandard or unsafe cooking solutions. Ethanol fuel standards must address proper alcohol and content, safe additives, and ensure clean and safe combustion. In addition, cookstove standards should cover thermal efficiency, emissions (CO and PM), durability, and user safety. Adopting and enforcing internationally recognised standards, like the ISO Tier Framework for Clean Cookstoves, will align Kenya with global best practices.

To ensure effective enforcement of these standards, there is a need to build the capacity of regulators and testing laboratories to enable regular or periodic monitoring of compliance and conduct regular market surveillance. To ensure compliance and market transformation, the government, through KEBS, EPRA, and other relevant stakeholders, should implement penalties for non-compliant cooking solutions. The aim is to incentivise local manufacturers to upgrade production processes to adhere to the set standards.

iv. Promote Certification Schemes to Promote Compliance by Local Manufacturers

Certification of clean cooking products before their entry into the market ensures that the products meet established standards such as fuel efficiency, emissions limits, and durability. This is key in building consumer confidence, in addition to enhancing standardised clean cooking markets, fostering local industry growth, and therefore, accelerating the transition to reliable, high-quality clean cooking solutions in Kenya. The development and enforcement of localised testing and certification protocols aligned with international best practices requires the collaborative effort between the Ministry of Energy, the Kenya Bureau of Standards (KEBS), and the Clean Cooking Association of Kenya (CCAK). In Kenya, refrigerators have the Kenya Energy Label issued by EPRA, thus providing a model that can be adopted to clean cooking solutions that are manufactured in the country. As such, establishing a robust certification framework will encourage clean cookstove manufacturers to innovate and improve product quality while deterring the production and distribution of substandard appliances in the local market. To achieve this objective, it is critical to expand access to testing laboratories and provide technical assistance to small and medium-sized enterprises (SMEs) so as to reduce barriers to compliance. Additionally, public awareness campaigns will play a key role in educating consumers about the importance of purchasing certified stoves and fuels.

2.4.3 Promote access to finance and working capital

Provide Low-interest Loans, Credit Guarantees and Concessional Financing to Local Manufacturers

Providing targeted financial instruments is essential to strengthening Kenya's cooking sector and building the domestic capacity for sustained growth. To address the challenges of lack of high capital costs, limited access to affordable credit, the government, partnering with development partners and financial institutions, should develop dedicated financing mechanisms, including low-interest rates, credit guarantees, and concessional financing tailored to clean cooking enterprises.

The low interest rates would enable the local manufacturers to invest in equipment, expand production capacities and improve product quality without the burden of high repayment costs. Credit guarantees would be essential in derisking lending and financial institutions to extend credit to clean cooking enterprises. Concessional financing, potentially through blended finance arrangements, can offer longer tenures and grace periods that align with the investment horizons of manufacturing businesses. By improving access to finance for local manufacturers, Kenya can reduce reliance on imported technologies, lower the cost of clean cooking solutions, foster innovation, and create green jobs—thereby advancing the country's goal of achieving universal access to clean cooking by 2028.

ii. Develop Results-based Financing

The Kenyan government, through the Ministry of Energy and the Clean Cooking Implementation Unit, in collaboration with development partners and financiers, can establish a dedicated Clean Cooking RBF Facility aligned with Kenya's climate and energy access goals. Results-based financing from donors and international organisations can play a critical role in improving the attractiveness and sustainability of the sector. This can be achieved by ensuring that players in the ethanol industry meet financial and non-financial targets to continue to receive funding⁴⁴.

RBF tailored to local manufacturers has the potential to stimulate domestic production, improve the quality of stoves produced and expand market reach. This approach reduces the upfront capital risk for enterprises and attracts private sector investments by offering predictable performance-linked cash flows. Catalysing local private sector investment through access to financing is key in encouraging local production aimed at meeting the growing demand for clean cooking solutions, further contributing to the market development of the clean cooking sector.

2.4.4 Technical assistance

i. Create Incubator Programmes to Support the Clean Cooking Technology Sector

Technical assistance is an integral component in promoting local manufacturing for large-scale local production of clean cooking solutions. As part of providing technical assistance to promote local manufacturing, establishing incubator programmes dedicated to the clean cooking technology sector can play a transformative role in Kenya. These incubator programmes are essential in providing early-stage entrepreneurs, innovators and local manufactures with technical skills, facilities for developing their prototypes and optimising the designs of clean cookstoves, ensuring regulatory and legal compliance, business development support, and providing market and financial linkages through seed funding, grants, among other.

The incubator programs can be integrated with the local educational and training facilities and institutions such as the universities that offer technical programmes, technical and Vocational Education and Training Institutions (TVET) across the country and within the industrial parks. Key implementors that are needed to ensure the success of the incubator programmes include the Ministry of Education, Science and Technology, Ministry of Trade, Investments and Industry, with the support of development partners and private sector investors.

⁴⁴ GoK. (2021). Kenya Ethanol Cooking Fuel Masterplan

ii. Strengthening the National Carbon Registry

The national carbon registry plays a pivotal role in enabling clean cooking enterprises, especially those involved in local production of improved cookstoves, ethanol stoves, or electric cooking technologies, to quantify, verify, and monetise the greenhouse gas (GHG) emission reductions associated with their products. A robust, transparent, and accessible carbon registry enables local manufacturers to register their projects under credible standards. As such the government can play a key role in assisting the local clean cookstove producers register their enterprises and enabling them to access international carbon markets, such as the Voluntary Carbon Market (VCM) and emerging carbon markets established under Article 6 of the Paris Agreement.

However, the national registry cannot currently independently verify emissions data and mainly relies on documentation provided by developers while also conducting manual checks for those registered under independent standards. The DNA highlights this as an area in which support is needed for the improvement of its operations.

Since the carbon market is a relatively nascent area, supporting the national carbon registry therefore, involves strengthening the capacity of the Designated National Authority (DNA) by providing technical assistance and enhancing their expertise and tools for rigorous assessment of the carbon projects, monitoring, reporting, and verification (MRV) protocols tailored to clean cooking technologies, to ensure transparency and credibility. In addition, it would be crucial to strengthen the carbon registry's infrastructure to ensure accurate recording, tracking and managing of carbon credits in an effort to reduce risks such as double counting and increase stakeholder confidence.

2.5 Action Agenda 4: Reframe and Raise Awareness

The KNCTS identifies limited public awareness and weak political prioritisation as major barriers to the adoption of clean cooking solutions. The Strategy also recognises that shifting public perception and behaviour is vital in accelerating the adoption of clean cooking solutions in Kenya. Therefore, Action Agenda 4—Reframe and Raise Awareness—seeks to reposition clean cooking as a national development priority by embedding it in public discourse, political agendas, and community consciousness. The agenda aims to increase awareness of the health, environmental, and economic impacts of traditional cooking fuels, while promoting the benefits of clean alternatives. It targets multiple audiences, including households, youth, women, political leaders, and private sector actors.

In line with the core pillars of the Behaviour Change Community (BCC) Strategy, key messages will emphasise the health risks of traditional cooking methods, the economic and time-saving benefits of clean cooking, the role of clean cooking in protecting forests and the climate, and the empowerment of women and youth through safer, modern energy solutions. Messaging will be tailored to resonate with diverse audiences, leveraging trusted community voices, health workers, and local leaders to drive sustained behaviour change. A key component of the HIV/AIDS awareness campaigns that would be borrowed is the extensive participation by various public figures over a protracted period to firmly stamp the message in national consciousness. By 2030, the agenda envisions a well-informed public and political class that actively supports clean cooking adoption and policy integration.

2.5.1 Developing Awareness Promotion Materials for end-users

The first set of activities under Action Agenda 4 will be to develop relevant communication materials for raising awareness across the spectrum of political and business leaders, end-users, and value-chain actors. The Behaviour Change and Communication (BCC) Strategy will be a reference document.

The audiences will then be segmented (e.g., women, youth, households, political leaders, private sector) to enable development of tailored communication instruments and messages that speak to their specific motivations and barriers. For instance, health benefits will be emphasised for mothers and children, economic savings for households, and investment opportunities for businesses. Upon completion of the development of targeted communication materials and identification of relevant delivery channels, the Ministry of Health will carry out a pilot to pre-test communication materials. Pretesting will be carried out in diverse settings to ensure relevance and effectiveness across different user segments. These will include:

- Low-income rural areas, where traditional fuels are prevalent and awareness levels are low.
- Urban informal settlements, where affordability is a barrier despite the presence of supply
 chains.
- Middle-income urban areas, where households may have the financial capacity and access
 to clean cooking solutions but continue to rely on traditional fuels due to behavioral or
 cultural preferences.

Findings from the pilot programme will then inform any changes to be made to the communication materials ahead of full deployment to boost awareness across the respective target audiences.

2.5.2 Engaging Political and Business Leaders

Political and business leaders wield immense influence and strategic relevance in shaping public policy and investment flows. As such, this agenda proposes tailored engagement with these stakeholders to provide an in-depth understanding of the importance of supporting clean cooking initiatives, as well as incentivising and recommending ways of leveraging the respective roles and resources available to political and business leaders towards the achievement of universal access by 2030.

The Ministry of Energy and Petroleum will need to develop specific materials that would be useful for engagements with political and business actors. Considering the nature of these stakeholders to be engaged and the available forums, the MoEP will need to develop/adopt the following instruments as they are best suited for the stakeholders identified under this action agenda:

a) Political Engagement Briefs

Comparable to policy briefs, which are typically used to present evidence-based recommendations to policymakers in a concise and accessible format, political engagement briefs will be tailored specifically for political actors to support advocacy and decision-making. The briefs will help in framing clean cooking as a development and public health priority, aligning it with national and county goals such as Vision 2030, SDGs, and climate commitments.

Given the variety of political actors and the differences in their roles, each political engagement brief would outline the stakeholders' potential role, clearly highlighting relevant policy and budgetary entry points, and proposing actionable steps for support. Designed for facilitating quick reference, the briefs will equip political leaders with the strategic framing and messaging needed to advocate for clean cooking in legislative, budgetary, and public forums.

b) Evidence-Based Advocacy Toolkits

While political engagement briefs will be crucial during discussions with political actors, their brevity will not allow for detailed explanations behind the rationale for the various propositions therein. Therefore, to complement the political engagement briefs, the MoEP will use evidence-based advocacy toolkits which will offer deeper, data-driven resources including infographics, case studies, health and environmental impact data, and sample policy or legislative inserts.

The toolkits will support political actors in articulating the urgency and benefits of clean cooking, both in formal settings like parliamentary committee hearings and in community outreach. Additionally, the evidence-based advocacy toolkits will provide practical tools for follow-up, such as contact points, timelines, and templates for policy proposals, ensuring continuity and reinforcing advocacy efforts.

c) Investor Pitch Deck

To effectively engage business leaders and potential funding partners, the Ministry of Energy and Petroleum will use an investor pitch deck developed alongside the KNCTS Action Plan and

Investment Prospectus. The pitch deck will serve as a concise, visually illustrative, and strategically structured presentation that frames clean cooking as both a national development priority and a viable investment opportunity. Comparable to investor presentations used in the private sector, the pitch deck will be tailored to highlight the commercial potential, financing needs, and impact returns of KNCTS interventions.

The pitch deck will demonstrate the market opportunities that exist across fuels, technologies, and geographies. The deck will also outline the total and intervention-level investment needs, potential socio-economic and environmental impacts, and a clear value proposition for different categories of partners. For flexibility, the pitch deck will be adaptable to suit the interests of development partners, private investors, and blended finance actors, and will be used in investor roundtables, bilateral meetings, and high-level forums.

For promoting awareness among political actors, the following categories of actors should be engaged:

- (i) Women-oriented caucuses/associations: While the approach is to frame clean cooking more as a development issue rather than a gender issue, the implementing entities can still leverage on the fact that cooking has gender implications. Therefore, political engagement briefs can be prepared for engagement with women-oriented political caucuses that are already active in community development and can be powerful advocates including:
 - The Kenya Women's Parliamentary Association (KEWOPA): As a cross-party
 caucus comprising all women parliamentarians from both the National Assembly
 and Senate, KEWOPA champions gender-responsive legislation, civic awareness,
 and inclusive governance. KEWOPA's influence in parliamentary committees and
 budget processes makes it a strategic ally for mainstreaming clean cooking into
 national development priorities.
 - The Council of Governors Women's Caucus: Brings together all elected women governors and serves as a platform for advancing gender-responsive leadership within devolved governance. Guided by the G7 Strategy which provides a coordinated framework for delivering devolution through five pillars, including socio-economic development, their collective voice and leadership make them influential champions for reframing clean cooking as a development and public health priority.
 - The Caucus of Governors' Spouses: Particularly through the G7 Women Governors'
 Strategy, this caucus plays a catalytic role in advancing socio-economic development
 and inclusive leadership at the county level. Their convening power and visibility in
 community initiatives position them well to champion clean cooking as a public
 health and development issue.
 - Women Members of County Assemblies (MCAs): Wards are the smallest
 administrative units of devolved governments. This gives members of county
 assemblies, especially women MCAs, very close proximity to communities and
 makes them instrumental in grassroots mobilization and policy advocacy within

devolved units. When compounded by MCAs' involvement in county planning processes, women MCAs become potentially effective messengers for reframing clean cooking as a household health and economic priority.

- (ii) Parliamentary committees: A review of various national and county-level planning and budgeting documents reveals limited coverage on clean cooking as a developmental issue. As such, to mainstream clean cooking into national and county planning and budgeting, the Ministry of Energy will develop engagement briefs for various Parliamentary committees to promote clean cooking awareness as a developmental issue and catalyze prioritization during planning and budgeting cycles. The engagement briefs will summarize current policy and budget gaps, and propose specific legislative or oversight actions such as motions, amendments, or budgetary allocations, that the committee can champion. The target legislative committees include:
 - Departmental Committee on Energy: This committee oversees the Ministry of Energy and Petroleum and is responsible for scrutinizing energy-related legislation, policies, and budget allocations. It plays a central role in reviewing national energy strategies, including clean cooking initiatives, and can influence the prioritization of clean energy access through legislative amendments and budgetary oversight.
 - Departmental Committee on Health: Responsible for reviewing health-related legislation, policies, and budget allocations. It plays a pivotal role in shaping national health priorities and can be instrumental in framing clean cooking as a public health imperative. By highlighting the health impacts of household air pollution, the committee can support the integration of clean cooking into preventive health strategies and influence funding for community-level interventions.
 - Departmental Committee on Environmental Forestry and Mining: Operating under the National Assembly, this committee addresses environmental conservation, forest management, and natural resource governance. Given the environmental implications of biomass-based cooking, this committee can support legislative efforts to promote sustainable alternatives and enforce environmental safeguards.

(iii) State Department of Devolution: Plays a central role in facilitating intergovernmental coordination and can significantly support KNCTS awareness and implementation as it is mandated to support the rollout of national policies at the county level. It can mobilise county executives, governors, and county assemblies to participate in sensitisation forums and policy dialogues. The Ministry of Energy can formally engage the State Department for it to co-convene structured forums where KNCTS can be introduced to counties, accompanied by draft policy templates to guide county-level adoption. It also has experience coordinating sector working groups and can support the development of county-specific clean cooking policies and legal frameworks. Additionally, the department can help integrate clean cooking into community-led programs such as FLoCCA by supporting awareness creation and aligning proposals with climate priorities. While it does not have a dedicated energy directorate, it can co-finance or coordinate donor-supported workshops and facilitate advocacy through its networks with governors and legislative bodies.

(iv) Council of Governors (CoG): The Council of Governors (CoG) plays a critical role in coordinating county-level development and can be instrumental in promoting KNCTS awareness and integration. Through its political structures, including the G7 platform of women governors, the CoG can cascade clean cooking messaging from county leadership to grassroots levels. It also supports peer-to-peer learning, enabling counties to replicate successful models such as Uasin Gishu's energy corporation or Makueni's investment prospectus. The CoG's Maarifa Centre, which is expanding to include energy data, can support real-time tracking of clean cooking access. Engagement with the Chair of the CoG Energy Committee can be prioritized to align county energy planning with KNCTS pillars and encourage integration into County Integrated Development Plans (CIDPs).

For promoting awareness among business actors, the Ministry of Energy and Petroleum will adopt a market-oriented approach that frames clean cooking as both a commercially viable and scalable opportunity. Engagement will be channelled through established private sector platforms such as the Kenya Private Sector Alliance (KEPSA), the Kenya Association of Manufacturers (KAM), and the Kenya National Chamber of Commerce and Industry (KNCCI), among others. That is because these entities represent a broad spectrum of businesses across manufacturing, distribution, finance, and innovation—sectors that are critical to the clean cooking value chain.

Beyond roundtable discussions with the targeted political and business actors, the MoEP will leverage platforms such as the Devolution Conference and Clean Cooking Week (See <u>Table 5 Table 9</u>) to amplify visibility, with endorsements from both influential political and business leaders acting as clean cooking ambassadors. These endorsements can be further propagated by disseminating them through multimedia channels to build momentum. Some of the various conferences and platforms that can be leveraged include:

Table 5: Forums for promoting clean cooking awareness and engagement

No	Framework	Opportunity	Date	Location
1.	Clean Cooking Week Kenya	Showcase KNCTS progress and mobilize public-private partnerships	August 2025	Kenya
2.	Devolution Conference 2025	Engage county leadership and integrate clean cooking into CIDPs and county energy plans	August 12-15 2025	Kenya
3.	Africa Climate Summit 2025	Position KNCTS as a model for climate-smart energy transitions	September 8– 10, 2025	Addis Ababa, Ethiopia
4.	County Investment Forums (e.g., Homabay 2024)	Present KNCTS investment opportunities to county governments and local investors	Ongoing (Annual)	Respective counties

MoEP, in collaboration with the respective partners, e.g., Ministry of Devolution for the Devolution Conference, CCAK for the Clean Cooking Week, e.t.c, will pursue participation in at least three strategic events per year. This will ensure continuous visibility, stakeholder engagement, and investment mobilisation for the KNCTS.

2.5.3 Awareness creation among end users

In contexts where there is widespread availability of low-cost or no-cost traditional cooking fuels, measures for bridging supply and affordability gaps do not provide adequate incentive to transition communities to cleaner cooking alternatives. Therefore, to address persistent reliance on traditional

fuels, it is crucial to conduct mass awareness campaigns targeting households and demonstrate the negative social, economic, and health impacts of using polluting, low-cost cooking options.

Based on its role of promoting public health awareness and environmental health as outlined in the Health Act, 2017, the Ministry of Health will use the targeted communication materials developed in the first phase of the action agenda to highlight the health risks of traditional fuels and the benefits of cleaner alternatives to communities. Communication materials will be disseminated through diverse formats including radio, TV, print, and digital media. These communication channels will be selected based on their effectiveness across different groups. For instance, in rural areas where the uptake of digital media may be lower than in urban areas, more accessible channels such as radio can be leveraged to reach the highest number of people.

To deepen community-level engagement, the Ministry of Health will coordinate with Community Health Promoters (CHPs), who are embedded within the Universal Health Coverage (UHC) framework and assigned to specific households. CHPs will be trained and equipped to integrate clean cooking awareness into their routine health outreach activities. This includes sensitizing households on the health risks of polluting fuels, demonstrating the use of clean cooking technologies, and supporting behavior change.

The Ministry of Health is also transitioning Module 14 of the Community Health Training Manual—which includes indicators on household energy use—into the MOH Virtual Academy to enhance accessibility and scale training efforts. With this transition, more training should be done for the Community Health Promoters on Module 14 to enhance their delivery

In addition to awareness creation, CHPs will support real-time monitoring of clean cooking adoption through the Electronic Community Health Information System (eCHIS), leveraging smartphones already in use for data collection. This will enable timely tracking of household energy practices and inform adaptive programming. Depending on the resources available and coordination frameworks, the MoH in collaboration with MoEP can explore approaches where CHPs can form groups that distribute clean energy products and services, creating a sustainable link between awareness, access, and adoption.

The Ministry of Health will also collaborate with the Ministry of Education to ensure that the schools incorporate clean cooking awareness to institutionalise knowledge and influence behavior at an early stage. This can take the form of involving clean cooking awareness in school club activities to further mainstream it as an issue of national priority.

2.5.4 Promoting Sustainable Waste Management Among Value Chain Actors

As the transition to clean cooking scales up, Kenya will need to ensure that clean cooking solutions do not inadvertently contribute to environmental degradation. Therefore, it is essential to promote sustainable waste management practices across the entire value chain and effectively manage the environmental footprint of new technologies.

The National Environment Management Authority (NEMA), as the principal state agency mandated to coordinate environmental management under the Environmental Management and Coordination Act (EMCA) and the Sustainable Waste Management Act (2022), will play a central role in this effort.

This is because waste management is a devolved function but NEMA still exercises a supervisory and coordination role to ensure compliance with national environmental standards.

Therefore, in collaboration with the Ministry of Energy and Petroleum (MoEP), NEMA will begin by identifying key actors involved in the production, distribution, and end-use of clean cooking technologies (e.g., LPG, electric, ethanol, briquettes, stoves). This will be followed by bilateral consultations with these actors to assess the types and volumes of waste generated, current disposal practices, and infrastructure gaps. These insights will inform the development of national waste management guidelines tailored to the clean cooking sector. The guidelines will provide clear protocols for classification, segregation, collection, treatment, and safe disposal of clean cooking-related waste.

To enhance compliance, NEMA will develop educational and training materials for manufacturers, distributors, consumers, and waste handlers. These materials will focus on safe disposal, recycling, and reuse practices. NEMA's Environmental Education and Awareness Department—which already conducts school programs, community outreach, and media campaigns—will lead these efforts. The department will also leverage existing "Green Points" in counties to showcase clean cooking technologies and promote sustainable practices.

In addition, sensitization workshops will be conducted for stakeholders across the clean cooking value chain, including county governments, community-based organizations, and private sector actors. These workshops will build capacity and promote best practices in waste management.

To strengthen circular economy practices, the agenda will promote linkages between clean cooking enterprises and licensed waste handlers and recyclers. This will facilitate the recovery and reuse of materials such as metal, plastic, and electronic components, reducing environmental impact and creating green jobs.

Public awareness campaigns will complement these efforts by educating consumers on proper disposal methods. These campaigns will leverage communication materials developed under the clean cooking awareness agenda and will be disseminated through radio, community forums, and digital platforms. In rural areas, where informal disposal is more prevalent, local leaders and Community Health Promoters (CHPs) will be engaged to promote behavior change.

To ensure coordinated and successful implementation of the proposed activities, there is need for formal inter-agency engagement mechanisms. Therefore, ministries and agencies engaging NEMA should submit formal letters to the Director General requesting nomination of technical representatives. This process ensures accountability and facilitates structured collaboration.

2.6 Action Agenda 5: Institute Accountability, Planning, and Continuous Tracking of Progress

The goal of universal access to clean cooking is a time-bound target as per the KNCTS and the Draft Energy Policy 2025-2034. Therefore, beyond the expected increase in uptake of cleaner cooking fuels, the timely achievement of universal access remains a critical performance indicator in the implementation of the KNCTS. As such, Kenya not only requires robust interventions across supply, affordability, and awareness, but also a strong institutional framework to ensure accountability, coordination, and accurate tracking of KNCTS implementation to ensure achievement of targets within the expected timelines.

Action Agenda 5—Institute Accountability, Planning, and Tracking—seeks to establish and operationalise institutional mechanisms that will oversee the implementation of the strategy, monitor progress, and ensure alignment with national development goals. This Action Agenda proposes the creation of a formal Clean Cooking Implementation Unit within the MoEP (Bioenergy and Clean Cooking Division) to institutionalise coordination and oversight of KNCTS implementation. In line with the KNCTS, the Draft Energy Policy 2025-2034 also proposes the formation of the CCIU, whose mandate will be formalised upon approval of the draft policy. There are several activities to be carried out in institutionalising the CCIU as discussed below.

2.6.1 Defining the Mandate of the Clean Cooking Implementation Unit

The Ministry of Energy and Petroleum is finalising the Terms of Reference (ToR) for the Clean Cooking Implementation Unit (CCIU), outlining its structure and responsibilities. The CCIU will be overseen by the Director of Renewable Energy and supported by a technical team comprising finance experts (resource mobilisation, carbon finance, fund management), monitoring and evaluation, and knowledge management and communication. Due to public hiring protocols via the Public Service Commission, it is recommended that development partners provide technical assistance to fill these roles. A steering committee, drawn from the Inter-Ministerial Committee on Clean Cooking (IMCCC), including line ministries and CCAK, will guide the CCIU. Additionally, five fuel-specific working groups—led by officers from the Renewable Energy Department and the State Department of Petroleum—will support implementation. These groups will include specialists, IMCCC representatives, and development partners. The CCIU's core functions include strategy implementation and updates, fundraising, monitoring and evaluation, stakeholder coordination, reporting on sector progress, and leading awareness and advocacy efforts. Table 6 Table 8 below illustrates the roles of the different divisions of the CCIU.

Table 6: The Roles of the Divisions of the CCIU (Source: MoEP)

Division of the CCIU	Key Roles	Meeting frequency
CCIU Steering	Strategic direction: Set the overall vision and long-	Quarterly
Committee	term goals	
	 Governance and oversight: Establish governance structures and policies 	
	Resource allocation and financial oversight:	
	Approve annual budgets and major expenses	
	Performance monitoring: Receive periodic progress reports	
	progress reports	
	 Risk management: Identifying and mitigating risks. 	
CCIU	Project planning: Develop detailed project plans	Monthly

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	Execution: Coordinate day-to-day activities and ensure adherence to the project plan Reporting and documentation: Manage records and report on progress to the CCIU steering committee and stakeholders regularly Communication and stakeholder management: Ensure effective flow of information among players and external partners	
CCIU WGs	Project planning: Develop detailed fuel-specific project plans Coordinate collaborations: Manage intra and inter working group collaborations. Specialized deliberations: Lead sub-sector specific conversations to promote specific cooking solutions Reporting and documentation: Provide the CCIU with regular updates on the outcomes of the deliberations	Regular meetings with monthly reports to CCIU

<u>Figure 7 Below</u> is the proposed structure of the CCIU.

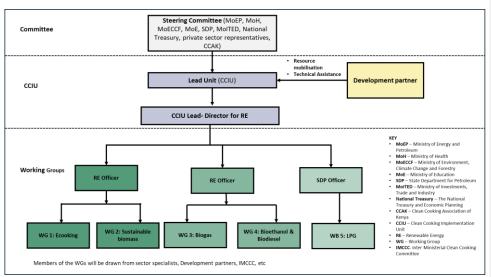


Figure 7: Proposed CCIU Structure: Source (MoEP)

MoEP will also develop an operational manual outlining detailed procedures, roles and responsibilities, coordination mechanisms, and monitoring and evaluation frameworks to guide internal processes. Eventually, the unit will be formally launched to introduce its leadership and mandate to stakeholders. To ensure transparency and track progress, the Ministry of Energy will publish annual performance reports of the Clean Cooking Implementation Unit. The potential roles of the CCIU are discussed in the section below. Other roles are also captured under the various action agendas discussed above.

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2.6.2 Coordinating the different activities under these strategies under each agenda

The CCIU will serve as the central coordination hub for the implementation of the KNCTS by overseeing and harmonising activities across the five action agendas and ensuring coherence in implementation.

This will involve developing and maintaining a detailed implementation matrix that maps out responsibilities, timelines, and interdependencies among stakeholders (as stipulated in the action plan). The CCIU will convene regular coordination meetings, facilitate cross-sectoral collaboration, and ensure that activities are sequenced and aligned to avoid duplication and maximise impact.

It will also be responsible for identifying implementation bottlenecks, proposing corrective actions, and ensuring that lessons learned in one action area are shared across others. Through this role, the unit will ensure that the KNCTS is implemented in a coherent, efficient, and results-oriented manner.

2.6.3 Coordinate resource mobilisation efforts for KNCTS and associated clean cooking strategies

Using the Investment Prospectus for the KNCTS and the Energy Compact as the primary reference for funding needs and resource mobilisation, the CCIU will engage a diverse range of financing sources identified in the prospectus, including:

- Government budget allocations
- Private sector investors
- Development partners
- Climate finance mechanisms (e.g., Green Climate Fund, Adaptation Fund)
- Philanthropic organisations

The draft Energy Compact estimates that achieving clean cooking access for the 69% of the population currently dependent on traditional biomass will require approximately US\$696 million by 2030. Of this, US\$500 million is expected to come from the private sector, while the remaining US\$196 million will be sourced from public sector contributions. The Ministry views the Energy Compact as a critical instrument to support resource mobilisation efforts under the Mission 300 (M300) initiative, particularly through public-private partnerships.

The CCIU will also be responsible for supporting the finalisation of the Energy Compact and reviewing the Investment Prospectus and updating it to reflect emerging opportunities and priorities. It will also coordinate the preparation of funding proposals, facilitate donor roundtables, and maintain a pipeline of bankable projects aligned with the KNCTS.

Additionally, the unit will track and report on financial commitments and disbursements to ensure transparency and accountability in the use of mobilised resources.

2.6.4 Explore the formation of a consolidated energy Fund

Section 216 of the Energy Act of 2019 mandates the creation of a national energy fund, known as the **Consolidated Energy Fund**, to be established by the Cabinet Secretary. This provision is echoed in the draft National Energy Policy (2018–2035), which outlines the fund's intended uses, including:

- Supporting the operations of energy institutions (e.g., the Energy Institute and the Energy Efficiency & Conservation Agency)
- · Disaster risk mitigation and response
- · Addressing hydro risk during periods of drought
- · Conservation of water towers
- · Advancing renewable energy, including conducting pre-feasibility studies
- · Decommissioning outdated energy infrastructure
- Implementing price stabilization mechanisms

The draft policy also details the potential sources of funding for the Consolidated Energy Fund, such as: fines and penalties from the energy sector, contributions from energy stakeholders, the sovereign wealth fund, treasury allocations, proceeds from capital markets (e.g., bonds and bills), recovered corruption-related assets, development partner contributions, and consumer levies. The fund is to be administered under the Public Finance Management Act, with specific regulations issued by the Cabinet Secretary.

A key challenge faced by the Ministry of Energy and Petroleum (MoEP) has been its limited capacity to manage such a fund—an issue raised when the Ministry sought KES 11 billion. In response, the Kenya Clean Cooking Financing Strategy for enterprises and consumers proposed the establishment of the Kenya Clean Cooking Facility (KCCF) to finance both enterprises and end-users.

Although the terms *facility* and *fund* are sometimes used interchangeably, they serve distinct functions. A fund primarily pools and disburses capital for a defined purpose, while a facility acts as the operational mechanism that enables the effective deployment of funds—often providing advisory, coordination, or technical support, with or without directly disbursing financing. A facility may, in some cases, manage or oversee a fund.

Given this context, the Clean Cooking Implementation Unit (CCIU) is well-positioned to explore options for strengthening MoEP's institutional capacity to establish and manage a consolidated energy fund. This includes assessing whether hiring a professional fund manager could address concerns raised by the National Treasury or whether the establishment of the CCIU itself sufficiently resolves capacity gaps.

The CCIU could also draw lessons from how other countries have structured similar energy-sector funds. Notable examples include:

- The Mwinda Fund in the Democratic Republic of Congo, which aims to expand energy access to low-income households
- Namibia's National Energy Fund (NEF), which supports electrification, infrastructure loans, and energy equity initiatives
- **Zimbabwe's Renewable Energy Fund (REF)**, dedicated to advancing renewable energy in line with the Sustainable Development Goals

The MoEP has already submitted a concept note on the proposed fund to the National Treasury. Building on this foundation, the CCIU can help refine and advance these efforts.

2.6.5 Track progress in implementation of the KNCTS and adjacent strategies

The CCIU will establish and operationalise a robust monitoring and evaluation (M&E) framework that enables systematic tracking of progress in implementing the five KNCTS action agendas and other complementary national strategies. This will involve identifying and harmonising Key Performance Indicators (KPIs) to ensure consistency in reporting and comparability of results. This action plan establishes an M & E framework for KNCTS, which will be operationalised by the CCIU.

Based on the entities assigned roles under the KNCTS, the CCIU will be coordinating quarterly meetings to check on the progress in execution of the specific activities, any challenges encountered, and clarity of next steps to provide support where necessary in terms of availing resources or facilitating collaboration between separate entities. For reference and accountability purposes, meeting notes of each of these bi-monthly meetings can be circulated with attendees each time.

Additionally, the CCIU will be responsible for developing data collection tools, coordinating with implementing agencies to gather timely and accurate data, and producing quarterly and annual progress reports. For uniformity, the CCIU will develop reporting templates to enable various entities to provide relevant data required to assess progress.

The CCIU will also facilitate periodic strategy reviews, learning sessions, and planning processes to ensure that implementation remains responsive to emerging challenges and opportunities. Such an approach will enable the CCIU to provide evidence-based insights to inform decision-making, enhance accountability, and drive continuous improvement in the clean cooking sector.

2.6.6 Continuous Tracking of Progress in the sector.

The CCIU will lead the development of long-term strategic frameworks that guide the clean cooking transition in Kenya. This will include data collection, conducting scenario modelling to assess the potential impacts of various policy, technology, and market interventions on clean cooking adoption, emissions reduction, and health outcomes.

Continuous Data Collection

A significant challenge in Kenya's clean cooking sector is the lack of consistent tracking and monitoring of cooking solution usage. To address this gap, there is a need to: (i) develop a standardised data collection framework for clean cooking at the county level; (ii) establish regular intervals for comprehensive data collection across various levels—household, institutional, community, market, county, and policy; and (iii) define mechanisms for data dissemination and use.

The ongoing UKPACT-supported initiative, "Accelerating Clean Cooking Adoption: A Data-Driven Approach and Capacity Building," provides a strong foundation for this work. Through the project, a national baseline will be created, standardised data collection methods will be developed, and county officials will be trained in data gathering techniques. The Clean Cooking Implementation Unit (CCIU) will build on these efforts through the following activities:

1. Establishing Data Collection Approaches and Timelines

The CCIU will define appropriate methodologies and **regular collection intervals** for clean cooking data.

- A key strategy is to leverage existing infrastructure by transferring knowledge and skills to county-level actors, including youth, women, and Community Health Workers (CHWs).
- CHWs, central to Kenya's Community Health Strategy, are well-positioned to conduct household visits, provide education, and gather critical data, such as household fuel use and related health impacts.
- The data collected will be compiled at the county level and shared with the Ministry of Energy and Petroleum. The Ministry is currently drafting a **memorandum** outlining the formal procedure for data reporting between counties and the national government.

The CCIU will also oversee the **commissioning of national surveys** at defined intervals to sustain long-term data collection.

- In consultation with stakeholders, appropriate frequencies—such as every five years, in line
 with the County Integrated Development Plan (CIDP) cycle—will be proposed.
- Clean cooking indicators may also be integrated into existing national surveys, including the
 Kenya Integrated Household Budget Survey (KIHBS), the National Census, or the
 Demographic and Health Survey (DHS). In addition to capturing primary stove types, the
 surveys may include quantitative data on fuel usage across various types of fuels within
 households.
- For counties facing financial constraints, phone-based surveys may serve as a practical alternative for tracking clean cooking progress.

2. Enhancing Data Access and Dissemination

To support data transparency and stakeholder engagement, the CCIU will assess the feasibility of establishing an **online repository** or integrating this function into the **ongoing knowledge management platform**.

- The platform could be hosted on the Ministry of Energy and Petroleum's website and mirrored on county-specific portals, enabling users to access historical and trend data easily.
- It will include **interactive data visualisations** and **simple analytical tools** to allow users to explore the data.
- Additionally, the platform will offer downloadable resources such as questionnaires, training manuals, and data collection frameworks, which can be used in future assessments.

Continuous tracking of Impact

Transitioning to clean cooking solutions offers a wide range of benefits, including reductions in greenhouse gas (GHG) emissions, improved health outcomes, environmental protection, and economic gains both at the household and national levels. With the implementation of continuous data tracking in the sector, it becomes essential to monitor and quantify these impacts. Such evidence

will play a critical role in resource mobilization efforts, helping to reposition the cooking agenda beyond its traditional framing as a gender issue, and instead highlight its multi-dimensional benefits.

To support this, several established tools will be leveraged, including:

- BARHAP (WHO) for health and emissions tracking
- The Clean Cooking Economic Co-Benefits Tool (SEforALL)
- The Energy Consumption Registry Tool developed by the Ministry of Energy and Petroleum (MoEP) with support from GIZ

As part of ongoing efforts, capacity-building initiatives will be conducted—for instance, training sessions for MoEP staff to effectively use the energy consumption tool. The Clean Cooking Implementation Unit (CCIU) will ensure these tools are not only adopted but also effectively applied by facilitating continuous training and supporting the generation of knowledge products and analytical publications that showcase these co-benefits.

With the resources described above, the unit will work closely with stakeholders across government, academia, and the private sector to ensure that clean cooking is integrated into national and county development plans, energy master plans, and climate strategies. It will also be responsible for reviewing and aligning sectoral policies—such as those related to energy, health, environment, and industry—to eliminate contradictions and promote coherence in implementation.

Once the CCIU is fully constituted with Terms of Reference, the committee will be officially gazetted, and a calendar of activities will be developed. Technical working groups will be formed to focus on key thematic areas such as fuels, technologies, financing, gender and inclusion, and waste management. Afterwards, MoEP, with support from CCAK, will conduct capacity-building sessions to equip members with the necessary skills in planning tools, data analysis, and policy frameworks.

Together, these institutional arrangements will provide the backbone for KNCTS implementation, ensuring that activities are well-coordinated, progress is tracked, and planning is informed by data and stakeholder input.

3 Monitoring and Evaluation Framework

3.1 Monitoring of the implementation of the strategy

The strategy's implementation will be evaluated through a structured and ongoing process of data collection, analysis, and utilisation to monitor the progress of activities, outputs, and immediate results. As previously outlined, the Clean Cooking Implementation Unit (CCIU) will play a leading role in tracking the strategy's progress by regularly reviewing key performance indicators (KPIs) and milestones to assess its effectiveness and impact. This continuous monitoring will support ongoing refinement of the strategy's activities to remain responsive to evolving conditions. Monitoring and reporting will follow two main approaches, guided by the established KPIs as discussed below.

Quarterly Reporting: A standardised reporting template will be developed for all implementing institutions. Each institution will be required to complete and submit this template to the CCIU. A quarterly review meeting will then be convened, where stakeholders will share updates on their respective activities. This platform will help identify key gaps, propose corrective measures, and extract lessons to enhance implementation. It will also promote collaboration among participating entities

Annual Reporting: A comprehensive annual report will be compiled by the CCIU, synthesising progress and milestones reported throughout the year. This report will be shared with stakeholders for validation and submitted to the Director of Renewable Energy for final approval.

3.2 Evaluation of the implementation of the strategy

Evaluation will be implemented in three stages: (i) baseline level, (ii) mid-term evaluation and (iii) endline evaluation. Figure xx below provides a summary of the evaluation approach.

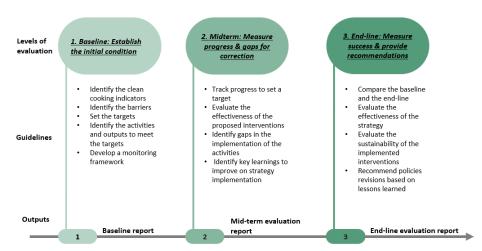


Figure 8: Summary of the Evaluation Approach

The evaluation will be guided by the OECD-DAC⁴⁵ discussed below.

Relevance: The extent to which the proposed intervention in the KNCTs aligns with the needs, priorities, and policies of beneficiaries and stakeholders in the sector.

Coherence: The extent to which the KNCT interventions fit with other interventions by the same actor, government, or donors (internal and external coherence).

Effectiveness: The extent to which the strategy is achieving or progressing toward its stated objectives.

Efficiency: The extent to which resources (funds, time, personnel) are used economically and on time to achieve results.

Impact: The positive and negative, intended and unintended, long-term effects produced by the KNCT intervention

Sustainability: The likelihood that the benefits of the intervention will continue after external support ends.

The evaluation stages are discussed in the section below.

- Baseline Assessment: The baseline assessment establishes the initial reference point for tracking
 progress throughout the strategy's implementation. The 2022 Kenya Demographic and Health
 Survey (KNBS), which informed the strategy's development, provides the baseline access rates
 for the sector. This action plan further defines baseline values for each activity, forming the
 foundation for future midline and endline evaluations.
- Midline Evaluation: A midline evaluation is planned for the second quarter of 2028, at the
 halfway mark of the five-year implementation period. This evaluation will play a critical role in
 assessing progress toward established targets, identifying implementation gaps, and
 recommending corrective actions to ensure alignment with the 2030 objectives. It will also
 evaluate the effectiveness of the interventions in achieving the intended outcomes.
- Endline Evaluation: The final evaluation will take place in 2031 and will compare endline results
 against the established baseline. Its purpose will be to assess the overall success of the strategy,
 analyse the impact of interventions, examine the sustainability of key components such as
 subsidy schemes, and provide policy recommendations for necessary adjustments and future
 planning.

A monitoring framework including outputs, key performance indicators and targets for the five agendas is detailed in the table below.

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⁴⁵ OECD. (2010). DAC Guidelines and reference series. Quality standards for development evaluation. Evaluation Criteria | OECD

Table 7: Monitoring and Evaluation Framework for Action Agenda 1 on bridging the supply gap

	Intervention description	Description	Output Key outputs	Agency responsible		Baseli	ne	Mid-term term targets	Cumulative end-term target	Timelines (Start Date)	Means of Verification
	Component/ program	Activities			Progress indicators	Year	Value		target	Datej	
1	Baseline assessment and planning	Aggregate energy consumption in educational institutions	A report on energy consumption for schools.	Ministry of Education	Number of schools assessed	2025	0	About 1,122 public TVET institutions About 43,076 primary and secondary schools	About 1,122 public TVET institutions About 43,076 primary and secondary schools	Q1 2026	A validated energy consumption report in schools
		Group the schools into hubs	Energy demand hubs created	Ministry of Education	A validated energy demand hub report	2025	0	TBC ⁴⁶	TBC	Q1 2026	A validated energy demand hub report
2	Policy & Institutional Alignment	Issue a directive to transition schools to clean cooking solutions	A policy directive issued	Ministry of Education & Ministry of Energy and Petroleum	Number of schools implementing the directive	2025	0	All schools (appx 44,000) use a form of clean cooking fuel in their energy mix	All schools (appx 44,000) use clean cooking fuel	Q2 2026	An issued directive An evaluation report
3	Procurement and Operational Design	Develop the procurement process	Procurement guide/manual	Clean Cooking Implementation Unit	Number of procurement documents	2025	0	1 procurement manual	1 procurement manual	Q1 2026	A validated Procurement guide/manual
4	Project Roll- out	Conduct a pilot	Pilot report	Clean Cooking Implementation Unit	Number of solutions tested	2025	0	5 types of cooking solutions	5 types of cooking solutions	Q4 2026	A validated pilot report

 $^{^{46}}$ To be confirmed after the data collection activity described in the row above is completed

		Conduct phase 1	Phase 1 report developed	Clean Cooking Implementation Unit	Number of households reached	2025	0	1.5 million households ⁴⁷	1.5 million households	Q1 2027	Evaluation report
		Conduct phase 2	Phase 2 report developed	Clean Cooking Implementation Unit	Number of households reached	2025	0	1.5 million households	1.5 million households	Q1 2028	Evaluation report
		Conduct phase 3	Phase 3 report developed	Clean Cooking Implementation Unit	Number of households reached	2025	0	0	1.5 million households	Q1 2029	Evaluation report
		Conduct phase 4	Phase 4 report developed	Clean Cooking Implementation Unit	Number of households reached	2025	0	0	1.5 million households	Q3 2029	Evaluation report
5	Carbon Project	Develop a carbon project for schools	Project design	Clean Cooking Implementation Unit and a Carbon Financing expert	Number of schools covered by the project	2025	0	0	ТВС	ТВС	Approval Report

⁴⁷ Using the market segmentation analysis, calculated the households that require supply chains developed. Divided that into 4 implementation phases. About 6 million households divided into 4.

Table 8: Monitoring and Evaluation Framework for Action Agenda 2 on bridging the affordability gap

	Intervention description	Description	ork for Action Agenda Output Key outputs	Agency responsible	l l	Baselin	e	Mid- term term	Cumulative End term	Timelines (Start Date)	Means of Verification
	Component/ program	Activities			Progress indicators	Year	Value	targets	target	,	
Α	Design a deman	d-side financing pr	ogram	•				-	-	•	
1	Demand-side subsidy	Design a targeted consumer subsidy program	Consumer subsidy program designed	Ministry of Energy and Petroleum, Ministry of Labour and	Subsidy mechanism developed and rolled out	2025	0	1	1	Q1 2026	Approved subsidy framework document
		Identify the subsidy beneficiaries	Database of subsidy beneficiaries established	Social Protection, Ministry of Devolution and	Number of beneficiaries in the database	2025	0	6, 600,000 ⁴⁸	6, 600,000	Q1 2026	Beneficiary database records
		Pilot the subsidy	Pilot conducted	ASAL and a consultant	Number of beneficiaries in the pilot phase	2025	0	330,000 ⁴⁹	330,000	Q2 2026	Pilot implementation reports
		Consumer subsidy rollout	Subsidy rolled out		Roll out strategy in place	2025	0	1	1	Q3 2026	Rollout strategy document, beneficiary lists
2	Consumer credit financing by microfinancing institutions	Design a consumer credit product with financing institutions	Clean cooking credit financing designed	Ministry of Energy and Petroleum, Ministry of Finance and a	Clean cooking financing program established	2025	0	1	1	Q2 2026	Product launch event and strategy document
		Develop and sign MOUs with financing institutions	MOU designed and executed	consultant	MOUs signed	2025	0	5	10	Q2 2026	MOUs signed
		Roll out the credit financing programme	Credit product rolled out		Credit financing facility launched	2025	0	5	10	Q2 2026	Rollout reports

⁴⁸ Based on the market segmentation analysis under KNCTS (low income HH in urban and rural areas. This number will be revised during the program design.

 $^{^{\}rm 49}$ 5 % of households targeted with subsidies are included in the pilot

3	Community level financing (leverage community platforms such as Saccos, VSLs and	Design financing product for VSLs with loans for clean cooking products	VSL Financing strategy designed		Financing product established	2025	1	1	1	Q1 2026	Strategy document
	cooperatives)	Map microfinancing institutions that can work with VSLs	List of financing institutions established	Ministry of Energy, Office of the First Lady Ministry of Health	Number of financing institutions partnering with VSLs	2025	0	5	10	Q1 2026	Partnership agreements
		Map registered VSLs in rural and urban areas	Database of registered VSLs		Number of VSLs mapped	2025	0	TBD	TBD	Q1 2026	Database of registered VSLs
		Develop MOUs between VSLs and SACCOs and microfinancing institutions	MOU executed between VSLs and SACCOs/MFIs		Number of MOUs signed	2025	0	5	10	Q1 2026	Signed MOUs
		Roll out VSL financing strategy	VSL financing rolled out		Number of VSLs providing credit for cookstove products	2025	0	5	10	Q2 2026	Roll out report and implementation report
4	Design the financing component to	Design a carbon finance project	Program design	CCIU with support from Ministry of	Number of clean cooking projects registered	2025	0	15	30	Q1 2026	Copy of project design document
	access funding from the co- benefits of clean cooking	Register the carbon project	Project registered with Carbon Registry	Environment, Ministry of Energy, supported by	Approval status of the project	2025	0	15	30	Q1 2026	Approval certificate (no objection certificate)
		Design a technology deployment and tracking framework	Clean cooking technologies deployed	development partners	Number of stoves with t functioning monitoring systems	2025	0	TBD	TBD	Q1 2026	Distribution records

		Monitor, verify	Monitor stove		Tons CO2e	2025	0	TBD	TBD	Q3 2026	Monitoring
		and report	usage		verified						data reports,
					Number of						audit reports
					credits issued						
5	Support local	Undertake a	Training needs	CCIU supported	Number of	2025	0	TBD	TBD	Q1 2026	Monitoring
	companies to	training needs	assessment	by a carbon	enterprises						data reports,
	register their	assessment	undertaken	finance expert	assessed						audit reports
	clean cooking	Conduct	Enterprises		Number of	2025	0	TBD	TBD	Q1 2026	Monitoring
	projects with	technical	trained		enterprises						data reports,
	the carbon	assistance on			trained and						audit reports
	registry	carbon project			mentored						·
		registration									

Table 9: Action Agenda 3: Promote local manufacturing

Table 9: Action Agenda 3: Promote local manufacturing									T =		
	Intervention description	Description	Outputs	Agency Responsible	Progress indicators		Baseline	Mid- term	End- term	Timelines (Start	Means of Verification
	Component/	Activities				Year	Value	target	target	date)	
	program										
Α	Establish ethano	l hubs and manu	facturing clusters				•	•	•	•	
1	Outgrower schemes and aggregation centres (bioethanol)	Mobilise and register interested smallholder farmers into cooperatives	Cooperatives formed	Ministry of Energy and Petroleum, Clean Cooking Implementation Unit (CCIU),	Number of cooperatives formed	2025	0	TBD	TBD	Q2 2026	Cooperative registration certificates
		Establish out- grower agreements with bioethanol processors	Smallholder farmers are formally enrolled	Ministry of Trade and Industrialisation	Number of signed out- grower contracts- Area (in acres) under cultivation	2025	0	3	7	Q2 2026	Out-grower scheme policy/plan
		Sign-off taker agreements with processors	MOUs signed		Number of contacts signed	2025	0	3	7	Q2 2026	Signed contracts
		Establish aggregation centers	Operational aggregation center		Number of centres established, volume of feedstock aggregated	2025	0	3	TBD	Q3 2026	Construction reports, aggregation records
2	Establish block farms	Identify farmers	Functional block farms	Ministry of Energy and Petroleum,	Number of farmers participating	2025	0	TBD	TBD	Q2 2026	List of participating farmers
		Establish MOUs with investors	Signed agreements	Clean Cooking Implementation Unit (CCIU), Ministry of	Number of hectares under biofuel crop	2025	0	TBD	TBD	Q2 2026	Signed contracts

		Provide extension	Trained farmers	Trade and Industrialisation	Number of trained	2025	0	TBD	TBD	Q3 2026	Training reports
		services	Tarmers	muustrialisation	farmers						
3	Establish centralised clean cooking production	Design facility layout for production	Technical designs developed and approved	Ministry of Energy and Petroleum, Clean Cooking	Number of designs developed and approved	2025	0	2	5	Q1 2026	Facility inspection reports, production logs
	centres	Construct production centres	Operational production centre	Implementation Unit (CCIU), Ministry of	Number facilities constructed	2025	0	2	5	Q3 2026	Certificate of completion
		Procure production equipment	Operational production equipment	Trade and Industrialisation	Number/type of equipment procured	2025	0	TBD	TBD	Q1 2027	Facility inspection reports, production logs
		Recruit technical staff	Technical staff recruited		Number of staff recruited	2025	0	TBD	TBD	Q1 2027	Staff contracts
		Develop production plans and roll out production	Production of technologies and fuels		Number of cookstoves/ quantity of fuels produced	2025	0	2	5	Q1 2027	Production inventory
		Establish distilleries for bioethanol	Production of bioethanol		Litres of bioethanol produced	2025	0	3	7	Q3 2027	Production inventory
4	Promote standardisation of ICS	Develop training manuals for local artisans	Training manual developed	Ministry of Energy and Petroleum, Clean Cooking,	Training manual developed	2025	0	1	1	Q1 2026	Training reports
		Train local producers on compliant designs	Trained local artisans, Certified ICS producers	Ministry of Trade and Industrialisation, Development partners	Number of manufacturers trained in standard- compliant production	2025	0	1,500	3,000	Q2 2026	Training attendance lists and reports

		Establishment and enforcement, and market surveillance	Regular monitoring conducted		Number of inspections conducted	2025	0	650	1,269 ⁵⁰	Q2 2026	Inspection reports and enforcement data
5	Promote local assembly for modern cookstoves (electric	Identify local assemblers and private sector partners	List of vetted and willing assembly partners		Number of companies onboarded	2025	1	2	6	Q1 2026	Partnership agreements
	cooking)	Sign MOUs with partners	MOUs signed and executed		Number of signed MOUs	2025	0	3	6	Q2 2026	Signed MOUs
		Set up assembly units	Functional assembly units		Number of operational assembly units established	2025	0	2	6	Q4 2026	Site inspection reports, procurement records
		Facilitate technology transfer	Signed technology transfer agreements		Number of agreements signed	2025	0	2	6	Q4 2026	Singed agreements
		Train staff	Staff trained		Number of trained staff	2025	TBD	2025	TBD	Q4 2026	Training reports
В	Advocate for po	licy and regulato	ry reforms								
1	Tax incentives	Draft legal amendments for VAT/duty waivers on eligible items	Legal amendment drafted	Ministry of Energy, supported by development partners	Legal amendment proposal submitted	2025	0	1	1	Q1 2026	Hansard
		Public review process	Public consultation conducted		Number of reviews	2025	0	1	1	Q3 2026	Review reports
		Gazette and publicize	Official gazette notice		Tax incentives gazetted	2025	0	1	1	Q1 2027	Gazette notice

 $^{^{\}rm 50}$ Inspections in the 47 counties, every 2 months for 4.5 years

		approved exemptions									
2	Facilitate access to SEZ	Sign MOUs with SEZ Authority and Ministry of Trade	MOU signed	Ministry of Trade and Industry, Special Economic Zones Authority	Number of MoUs signed	2025	0	5	5	Q2 2026	Signed MoUs, SEZ authority correspondence
		Identify SEZ- eligible firms	Eligible firms mapped	(SEZA), State Department of Industry	Number of eligible firms identified	2025	0	7	14	Q2 2026	List of firms
		Sensitize clean cooking enterprises on SEZ benefits	Awareness campaigns conducted		Number of firms sensitised	2025	0	7	14	Q3 2026	Workshop reports
		Train eligible enterprises on the application for SEZ registration	SEZ applications submitted by enterprises		Number of enterprises trained, number of successful applications	2025	0	7	14	Q3 2026	Registration reports
3	Enforce fuel and cookstove quality	Develop training manuals	Training manual developed	MoEP working with Kenya Bureau of	Training manual	2025	0	1	1	Q1 2026	Training reports
	standards	Train enforcement officers	Enforcement officers trained	Standards (KEBS)	Number of enforcement officers trained	2025	0	50	50	Q1 2026	Training reports, list of trained enforcement officers
		Conduct routine inspections	Inspections conducted		Number of inspections conducted	2025	0	TBD	TBD	Q1 2026	Inspection reports
4	Promote certification schemes to	Develop ToR for the technical committee	TOR developed	MoEP working with Kenya Bureau of	TOR completed	2025	0	1	1	Q2 2026	Approved TOR document

	promote compliance	Constitute technical committees	Committees operationalised	Standards (KEBS)	Committees established	2025	0	1	1	Q2 2026	Legal appointment documents
		Develop draft certification guidelines	Certification guideline developed		Certification guideline	2025	0	1	1	Q2 2026	Published drafts
		Public review process	Public consultation conducted		Number of reviews	2025	0	1	1	Q3 2026	Review Reports
		Incorporate stakeholder comments	Comments integrated		Updated guidelines finalised	2025	0	1	1	Q4 2026	Review Reports
		Roll out the certification schemes	Roll out strategy developed		Roll out strategy	2025	0	1	1	Q1 2027	Review Reports
С	Promote access	to finance and w	orking capital								
1	Provide access to low-interest loans, credit guarantee, and	Develop a loan guarantee product	Loan guarantee product designed	Ministry of Energy, supported by development	Loan guarantee product	2025	0	1	1	Q2 2026	Approved loan product report
	concessional financing	Map financial institutions	Financial institutions mapped	partners	Number of financial institutions onboarded	2025	0	10	10	Q2 2026	List of financing institutions
		Sign MOUs	MOUs signed and executed		Number of MOUs signed and executed	2025	0	10	10	Q2 2026	Signed MOUs
		Roll out the loan product	Roll-out strategy developed		Loan product rolled out	2025	0	5	10	Q3 2026	Roll out report
2	Develop an RBF scheme	Design RBF facility	RBF scheme designed		RBF facility established	2025	0	1	1	Q2 2026	Launch event and facility guidelines
		Sign supplier contracts and implement	Supplier agreement signed		Number of contracts signed	2025	0	15	30	Q2 2026	Signed supplier contracts

3	Design carbon finance	Design carbon projects Register clean carbon projects	Project documents provided Clean cooking carbon projects registered		Number of carbon projects designed Number of clean cooking carbon projects registered	2025	0	50	100	Q2 2026 Q3 2026	Project approval No objection certificates
1	Incubator programs	Sign MOUs with universities and technical institutions	MOUs signed	Ministry of Energy and Petroleum, Ministry of Trade and	Number of incubators	2025	0	2	5	Q1 2026	Signed MOUs
		Develop a selection criterion for the selection of SMEs	Selection criteria developed	Industrialisation, development partners, State Department of Industry	Selection criteria	2025	0	1	1	Q2 2026	Approved selection criteria
		SMEs competitively selected	SMEs selected into the incubator programme		Number of SMEs selected	2025	0	25	50	Q2 2026	Application records, Selection panel minutes
		Provide mentorship and training	Tailored support provided		Number of SMEs mentored	2025	0	25	50	Q2 2026	Training and mentorship logs and reports
2	Strengthen the national carbon registry	Conduct capacity assessment	Needs assessment undertaken	Ministry of Energy and Petroleum,	Assessment document finalised	2025	0	1	1	Q1 2026	Needs assessment report
		Build technical capacity	Capacity building conducted	Ministry of Trade and Industrialisation, development partners	Number of personnel trained	2025	0	10	10	Q1 2026	Training reports

Table 10: Agenda 4: Reframing the Creation of awareness

No.	Intervention description	Description	Output Key outputs	Agency responsible		Baseli	ne	Mid-term term targets	Cumulative end-term target	Timelines (Start Date)	Means of Verification
	Component/ program	Activities			Progress indicators	Year	Value	targets	target	Date	
1	Awareness Promotion Strategy	Develop tailored awareness materials for different target groups (e.g., households, youth, women, political leaders, private sector)	Awareness creation materials for end-users, political leaders, and business actors	Ministry of Health supported by the Clean Cooking Implementation Unit	Number of targeted awareness creation materials	2025		1	1	Q1 2026	Validated awareness creation materials for end-users, political leaders, and business actors
		Outline timelines, target audiences, key messages, media channels, and responsible actors for each phase of the campaign	Dissemination guidelines for awareness creation materials	Ministry of Health supported by CCIU	One dissemination guidelines document	2025	0	1	1	Q1 2026	Validated dissemination guidelines for awareness creation materials
2	Awareness Creation among end- users, political leaders, business actors, and end-users	Engage political and business leaders through roundtable meetings and conferences to mainstream clean cooking	Increased awareness and recognition of clean cooking as a development priority and investible opportunity	Clean Cooking Implementation Unit	Number of consultation meetings with political institution representatives	2025	0	10	10	Q2 2026	Signed Memoranda of Understanding (MoUs)
3		Engage business leaders through roundtable	Increased awareness and recognition of	CCIU	Number of conferences	2025	0	5	25	Q2 2026	Quarterly and annual

4		meetings and conferences to mainstream clean cooking Conduct mass awareness campaigns targeting endusers on the dangers of traditional fuels	clean cooking as a development priority and investible opportunity Increased visibility and awareness of clean cooking benefits	Ministry of Health and the Clean Cooking Implementation Unit	Number of mass awareness campaigns conducted	2025	0	25	47	Q2 2026	Quarterly and annual progress reports
5	Integrate clean cooking awareness into school	Formation of school clubs incorporating clean cooking	Mainstreaming of clean cooking into the education sector	Ministry of Education	Number of schools with programs incorporating clean cooking	2025	0	TBD	TBD	Q2 2026 - Q4 2028	Quarterly and annual progress reports
	and health outreach programmes	Training of Community Health Promoters (CHPs) on promoting clean cooking awareness and monitoring	Mainstreaming of clean cooking into the health sector	Ministry of Health and the Clean Cooking Implementation Unit	Number of CHPs trained on clean cooking awareness promotion and monitoring	2025	0	50,000	100,000	Q2 2026	Quarterly and annual progress reports
6	Promote sustainable, clean cooking waste management	Develop and disseminate guidelines on clean cooking waste management	Clean cooking waste management guidelines	National Environmental Management Authority supported by MoEP	1 national clean cooking waste management guidelines document	2025	0	1	1	Q2 2026	Validated clean cooking waste management guidelines document
		Educate actors on waste management, reuse, recycling,	Increased awareness on waste management	National Environmental Management Authority and	Number of awareness workshops conducted	2025	0	3	5	Q4 2026	Workshop reports

and safe disposal options for clean cooking appliances and packaging materials	and circularity strategies	the Clean Cooking Implementation Unit							
Facilitate linkages between clean cooking enterprises and licensed waste handlers and recyclers	Enterprises connected to licensed waste handlers	National Environmental Management Authority supported Clean Cooking Implementation Unit	Number of enterprises connected to licensed waste handlers	2025	0	25	50	Q1 2027	Annual progress report
Track participation, commitments made, policy shifts resulting from the engagements, and the impact achieved	Documented impact of clean cooking awareness initiatives	Clean Cooking Implementation Unit	Number of enterprises working with licensed waste handlers	2025	0	1	1	Q1 2027	Annual progress report

Table 11: Action Agenda 5: Institution Tracking and Accountability

	Intervention description	Description	Output Key outputs	Agency responsible		Baseli	ne	Mid-term term term targets	Cumulative end-term target	Timelines (Start Date)	Means of Verification
	Component/ program	Activities			Progress indicators	Year	Value		target	Date	
1	Establish a Clean Cooking Implementation Unit	Define the mandate, structure, roles, and reporting lines of the unit, including coordination with counties and other ministries	Terms of Reference	Ministry of Energy and Petroleum	One Terms of Reference	2025	0	1	1	Q3 2025	Terms of Reference
		Develop an operational manual	Operational manual	Ministry of Energy and Petroleum	One operational manual	2025	0	1	1	Q1 2026	Operational manual
		Issue official appointments and gazette the CCIU to formalise its operations	A gazetted committee	Ministry of Energy and Petroleum	One gazette notice	2025	0	1	1	Q1 2026	An official gazette notice
		Hold a formal launch event to introduce the unit, its mandate, and its leadership to stakeholders	Launch event	Ministry of Energy and Petroleum	One launch event	2025	0	1	1	Q1 2026	A public launch event
2	Strategy Implementation	Coordinate implementation of the strategy	Roll out of programs and activities	Clean Cooking Implementation Unit	Number of activities and programs rolled out	2025	0	TBD	TBD	Q4 2025	Annual progress report

					Number of coordination meetings						
3	Resource Mobilization	Engage donors and prepare proposals to mobilise resources for KNCTS	Funding proposals and donor roundtables	Clean Cooking Implementation Unit	Amount of funding mobilised annually	2025	0	TBD	TBD	Q1 2026	Funding proposals and donor roundtables
		Spearhead the formation of a consolidated energy Fund	The design of the consolidated energy fund	Clean Cooking Implementation Unit	Set up of the consolidated energy fund	2025	0	1	1	Q1 2026	A functional consolidated energy fund
4	Monitoring and Evaluation	Implement the M&E framework, collect data, an online platform to manage clean cooking data, publish reports	Quarterly and annual M&E reports	Clean Cooking Implementation Unit	Number of quarterly and annual M&E reports published	2025	0	10	20	Q2 2026	Quarterly and annual M&E reports

3.3 Detailed Work Plan

#	Years/Quarters	2026				2027				2028				2029				2030			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Acti	ion Agenda 1: Bridge the Supply Gap																				
(i) E	Baseline assessment and planning																				
1.	Aggregate energy consumption in																				
	educational institutions																				
2.	Group the schools into hubs																				
(ii) l	Policy & Institutional Alignment																				
3.	Issue a directive encouraging the																				
	transition to clean cooking solutions																				
(iii)	Procurement and Operational Design																				
4.	Develop the procurement process																				
(iv)	Project Roll-out																				
5.	Conduct a pilot																				
6.	Conduct phase 1																	1			
7.	Conduct phase 2																	1			
8.	Conduct phase 3																				
9.	Conduct phase 4																				
10.	Develop a carbon project for schools																				
	ion Agenda 2: Bridge the Affordability Ga	p for the	e Demai	nd Side	_																
(i) E	Design a targeted consumer subsidy inponent	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
11.	Design a targeted consumer subsidy																				
	program																				
12.	Identify the subsidy beneficiaries																				
13.	Pilot the subsidy																				
14.	Consumer subsidy rollout																				
	Consumer financing from financial itution component																				
15.	Design a consumer credit product with financing institutions																				
16.	Develop and sign MOUs with financing institutions																				

17.	Roll out the credit financing																				
	programme																				
	Community level financing (leverage																				
	munity platforms such as Saccos, VSLs																				
and	cooperatives)																				
18.	Design financing product for VSLs with																				
	loans for clean cooking products																				
19.	Map microfinancing institutions that																				
	can work with VSLs																				
20.	Map registered VSLs in rural and																				<u> </u>
20.	urban areas																				
21.	Develop MOUs between VSLs and																				
21.	SACCOs and microfinancing																				
	-																				
	institutions																				
	Design the financing component to																				
	ess funding from the co-benefits of																				
clea	n cooking																				
22.	Design a carbon finance project																				
23.	Register the carbon project																				
24.	Design a technology deployment and																				
	tracking framework																				
25.	Monitor, verify and report																				
	Support local companies to register																				
	r clean cooking projects with the																				
	oon registry																				
26.	Undertake a training needs																				
	assessment																				
27.	Conduct technical assistance on																				
	carbon project registration																				
Acti	on Agenda 3: Promote Local Manufacturi	ng and	Fuel Pro	duction	1																
(i) O	utgrower schemes and aggregation	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
cent	res (bioethanol)																				
28.	Mobilise and register interested																				
	smallholder farmers into cooperatives			l			l			1		l		1		l			1	l	
29.	Establish out-grower agreements with																				
	bioethanol processors			l			l			1		l		1		l			1	l	
30.	Sign-off taker agreements with																				
30.	processors																				
24	•																				
31.	Establish aggregation centers																				
(ii) E	stablish block farms																				

																1 1
32.	Identify farmers															
33.	Establish MOUs with investors															
34.	Provide extension services															
(iii)	Establish centralised clean cooking															
	duction centres															
																1
35.	Design facility layout for production															
36.	Construct production centres															
37.	Procure production equipment															
38.	Recruit technical staff															
39.	Develop production plans and roll out															
	production															
40.	Establish distilleries for bioethanol															
(iv)	Promote standardisation of ICS															
41.	Develop training manuals for local															1
	artisans															
42.	Train local producers on compliant															
	designs															
43.	Establishment and enforcement, and															
	market surveillance															
	Promote local assembly for modern cook	stoves (electric	cooking)											
44.	Identify local assemblers and private															1
	sector partners															
45.	Sign MOUs with partners															
46.	Set up assembly units															
47.	Facilitate technology transfer															
48.	Train staff															\Box
	ocate for policy and regulatory reforms															
	ax incentives					 ı	ı					Γ	Γ	Γ	1	—
49.	Draft legal amendments for VAT/duty															l
	waivers on eligible items															—
50.	Public review process															
51.	Gazette and publicize approved															ł l
(::)	exemptions								_							ш
	Facilitate access to SEZ						1					1	1	1		
52.	Sign MOUs with SEZ Authority and															i l
53.	Ministry of Trade Identify SEZ-eligible firms															
54.	Sensitize clean cooking enterprises on														 	\vdash
54.	Sensitize clean cooking enterprises on SEZ benefits															ł l
Щ	SET DEHIGIITS		<u> </u>			<u> </u>	<u> </u>					<u> </u>	<u> </u>	<u> </u>		لــــــا

55.	Train eligible enterprises on the				I	[[[I			I									ĺ
	application for SEZ registration																				
(iii)	Enforce fuel and cookstove quality stand	ards																			
56.	Develop training manuals																				
57.	Train enforcement officers																				
58.	Conduct routine inspections																				
(iv)	Promote certification schemes to promot	te comp	liance																		
59.	Develop ToR for the technical committee																				
60.	Constitute technical committees																				
61.	Develop draft certification guidelines																				
62.	Public review process																				
63.	Incorporate stakeholder comments																				
64.	Roll out the certification schemes																				
	ess to Finance and Working Capital																				
	Provide access to low-interest loans, credi	t guarar	itee and	conces	sional F	inancin	7														
65.	Develop a loan guarantee product	l guaran		T	1		Ī			I	ı		I			I					
66.	Map financial institutions																				
67.	Sign MOUs																				
68.	Roll out the loan product																				
	Develop an RBF Scheme	l	l																		
69.	Design RBF facility	ı	ı			<u> </u>	<u> </u>	<u> </u>	Ι	ı	ı	l e	ı			I					
70.	Sign supplier contracts and implement																				
71.	Design carbon projects																				
72.	Register clean carbon projects																				
	hnical assistance	<u> </u>	<u> </u>																		
	ncubator programs																				
73.			ı	<u> </u>	l e	<u> </u>	<u> </u>	<u> </u>	Ι	ı	ı	l e	ı			I					
75.	technical institutions																				
74.	Develop a selection criterion for the																				
	selection of SMEs																				
75.	SMEs competitively selected																				
76.	Provide mentorship and training																				
(ii) 9	Strengthen the national carbon registry																				
77.	Conduct capacity assessment																				
78.	Build technical capacity																				
Acti	ion Agenda 4: Reframing awareness creat	ion																			
	Awareness Creation Stratergy	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
79.	Develop tailored awareness materials																				
	for different target groups																				<u> </u>

80.	Outline timelines, target audiences, key messages, media channels, and for the campaign																				
(ii)	Awareness Creation Acrivities																				
81.	Engage political and business leaders through roundtable meetings and conferences to mainstream clean cooking																				
82.	Engage business leaders through roundtable meetings and conferences to mainstream clean cooking																				
83.	Conduct mass awareness campaigns targeting end-users on the dangers of traditional fuels																				
	Integrate clean cooking awareness into ool and health outreach programmes																				
84.	Formation of school clubs incorporating clean cooking																				
85.	Training of Community Health Promoters (CHPs) on promoting clean cooking awareness and monitoring																				
(iii)	Promote sustainable, clean cooking																				
was	ste management																				
86.	Develop and disseminate guidelines on clean cooking waste management																				
87.	Educate actors on waste management, reuse, recycling, and safe disposal options for cooking appliance waste																				
88.	Facilitate linkages between clean cooking enterprises and licensed waste handlers and recyclers																				
89.	Track participation, commitments made, policy shifts resulting from the engagements, and the impact achieved																				
	ion Agenda 5: Institute Accountability, Pla																				
	Establish and mainstream the Clean king Implementation Unit (CCIU)	Q1	Q2	Q3	Q4																

90.	Define the mandate, structure, roles, and reporting lines of the unit, including coordination with actors																
91.	Develop an operational manual																
92.	Issue official appointments and gazette the CCIU to formalise its operations																
93.	Hold a formal launch event to introduce the unit, its mandate, and its leadership to stakeholders																
(ii) S	Strategy Implementation	y Implementation															
94.	Coordinate implementation of the strategy																
(iii)	Mobilize resources for KNCTS implement	ation															
95.	Engage donors and prepare proposals to mobilise resources for KNCTS																
96.	Spearhead the formation of a consolidated energy Fund																
(iv)	l) Monitor and evaluate KNCTS progress																
97.	Implement the M & E Framework																

ANNEXES

ANNEX 1: DRAFT DATA COLLECTION TEMPLATE FOR SCHOOLS

ŧ	Category	Questions
A.	Introduction	i. Name of school
		a. Name of County
		b. Name of Sub-County
		c. Name of Constituency
		d. Name of Ward
		e. Name of locations/sub-location
		f. Name of Village
		i. Type of school
		a. Boarding school
		b. Day school
		c. Both boarding and day school
В.	Cooking	i. Do you cook meals for students
	_	i. What types of meals do you cook
		a. Breakfast
		b. Ten o'clock meal
		c. Lunch
		d. Dinner
		e. All the above
C.	Energy for cooking	i. List the type of cooking fuel
		a. Firewood
		b. Charcoal
		c. Kerosene
		d. LPG
		e. Ethanol
		f. Briquettes
		g. Pellets
		h. Electricity
		i. Other, specify
		i. Estimate the monthly consumption of the fuel (Kgs/Litres) (if you buy in
		lorries, please estimate the Kgs)
		i. Estimate the monthly cost of the fuel.