



# Clean Cooking Sector Investment Opportunity in Kenya



MINISTRY OF INVESTMENTS,  
TRADE AND INDUSTRY



**iINVEST KENYA**  
KENYA INVESTMENT AUTHORITY

# Acknowledgements



MINISTRY OF INVESTMENTS,  
TRADE AND INDUSTRY



EXECUTIVE OFFICE OF  
THE PRESIDENT  
OFFICE OF THE SPECIAL  
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## Government Agencies:

- Office of the First Lady
- The National Council for Nomadic Education in Kenya (NACONEK)
- The Kenya Prisons Service (KPS)
- The County Government of Makueni



## Development Partners:

- Clean Cooking Alliance (CCA)
- The International Energy Agency (IEA)
- Modern Energy Cooking Services (MECS) - CLASP & Gamos East Africa)
- EnDev (GIZ)
- Rockefeller Foundation
- The Children Investment Fund Foundation (CIFF)
- The World Resources Institute (WRI)
- United Nations Development Programme (UNDP)



## Clean Cooking Companies:

- BURN Manufacturers
- Ecobora
- IGNIS Innovation
- Feion Green Ventures
- Mwangaza Light
- Faith Engineering



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## Clean cooking global overview

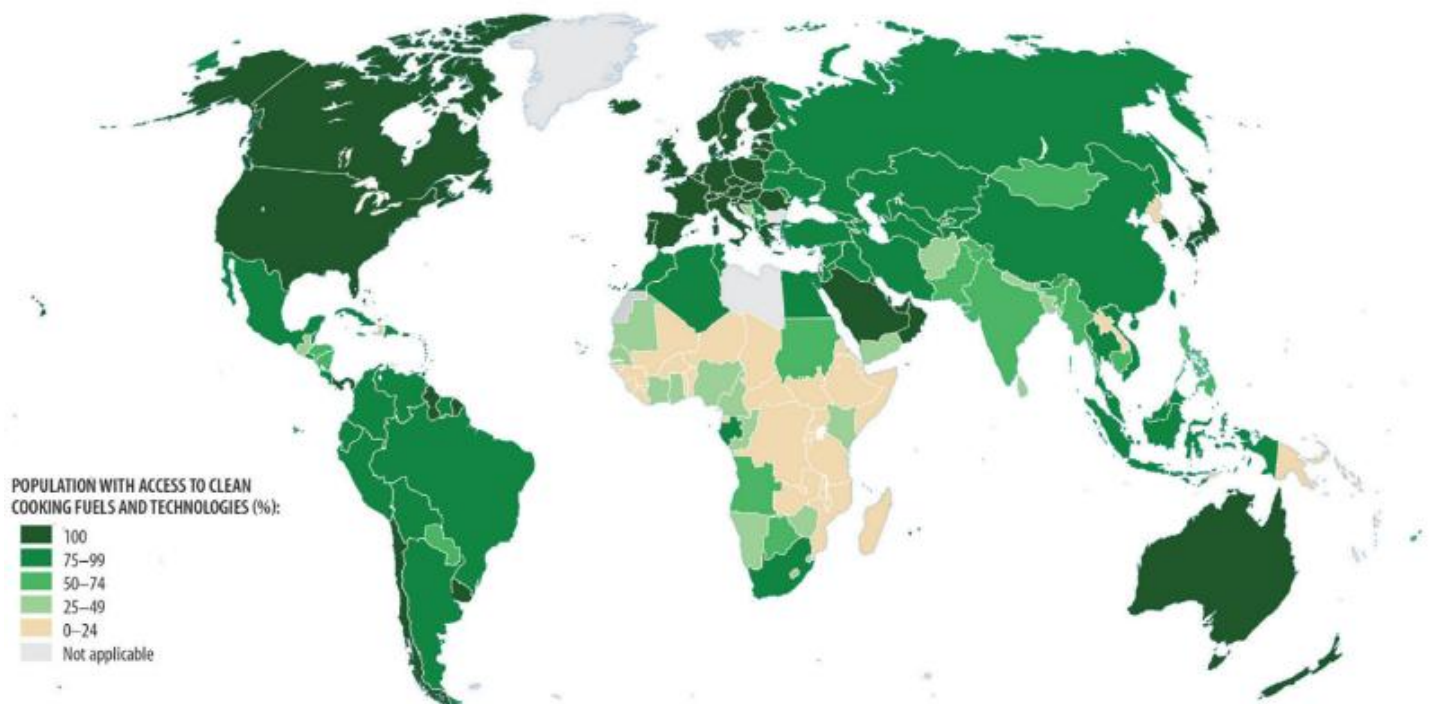


Clean cooking lags far behind other energy access gains, with progress significantly slower than electricity access across most regions.

2.1 billion people globally lack access to clean cooking - 75% of the population are in approximately 20 countries primarily in SSA and Asia.

960 million people in SSA lack access to clean cooking, with East Africa accounting for a substantial share.

The slow progress may threaten achievement of SDG 7 by 2030.



Source: WHO, IEA, UN SDG Tracking report

# Global financing for Clean Cooking



Globally, clean cooking remains one of the most under-invested sectors.

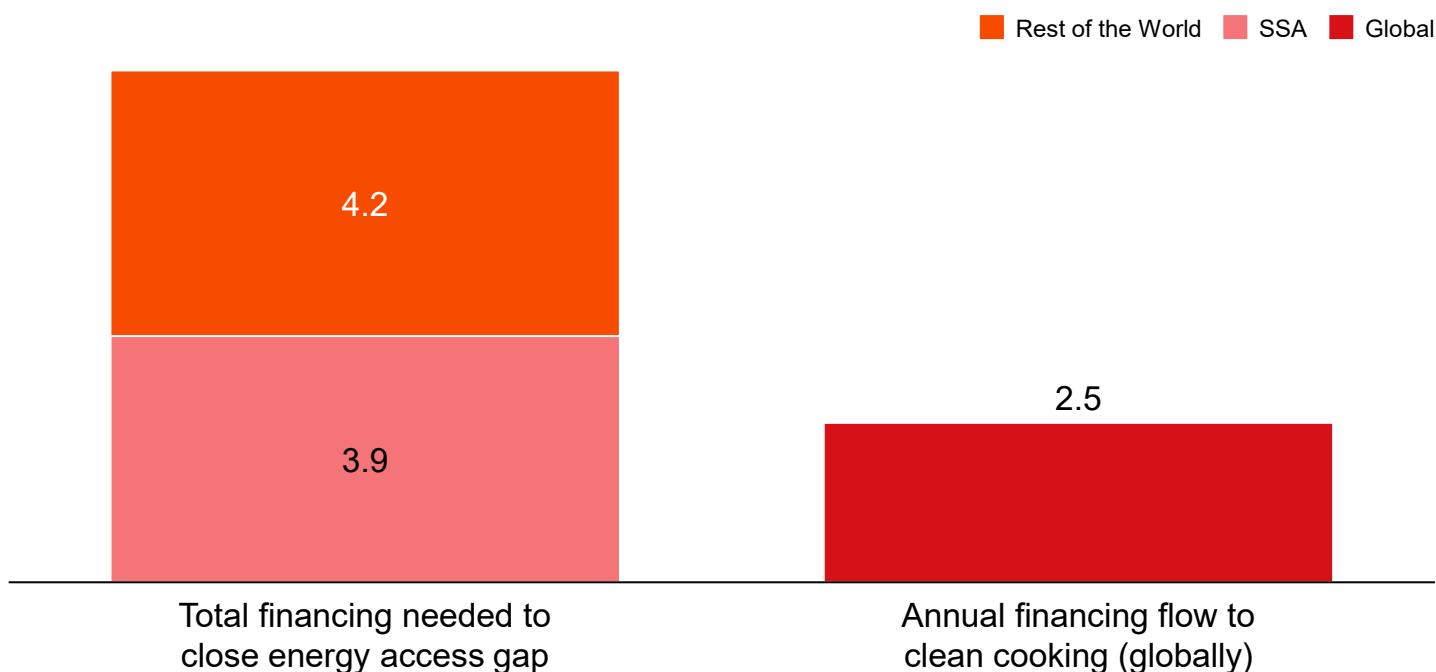
The IEA & CCA estimate that the annual financing need to close global access is about USD 8B/yr.

Only about USD 2.5B/yr is flowing to clean cooking sector.

Global investments will need to grow from the current levels, with about half of the growth flowing to SSA.

These figures focus on the investment needs of household cooking transitions – this sector pack highlights that institution cooking transitions could add similar volumes again\*.

## Total financing needed to close the clean cooking access gap, (Bn USD)



\* KNCTS (2024-2028) estimates the total financing needs for Kenya's household cooking sector at \$430m, whilst this sector pack estimates the total financing needs of Kenya's institutional cooking sector at \$559m.

Source: IEA & CCA Universal Access to Clean Cooking in Africa (2025)

# Financing Needs for Clean Cooking in SSA Region

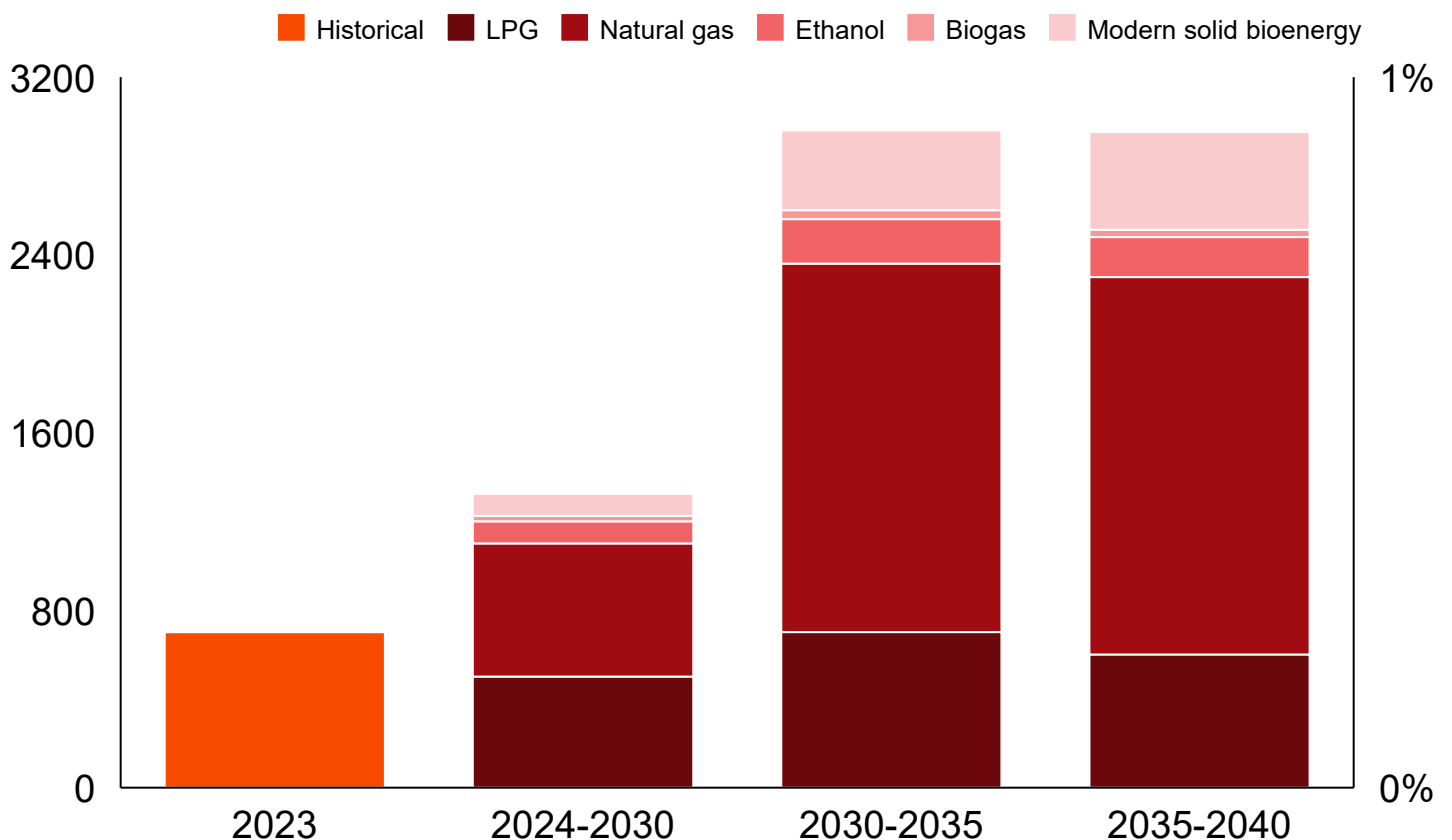


The IEA & CCA estimate that realizing universal access to clean cooking in SSA will require USD 37B by 2040 – more than USD 2B annually.

More than three-quarters of all capital is needed in East Africa (USD 17B) and West Africa (USD 12B).

LPG and electricity dominate investment needs, accounting for about 80% of required financing (~USD 20B for LPG & ~USD 9B for electricity), while modern bioenergy, bioethanol, and biogas together represent 20% of the remaining among.

## Share of Infrastructure in Million USD (2024, MER)



Source: IEA & CCA Universal Access to Clean Cooking in Africa (2025)

# Why Kenya is the Right Place for Clean Cooking

## Benefits from a Supportive Ecosystem

### Policy



Kenya’s National Energy Policy sets a target of universal access to clean cooking by 2030, operationalised through the KNCTS (2024–2028) and complementary strategies including the National LPG Growth Strategy. Government-backed rollout programs underway.

### Leveraging progress in electrification

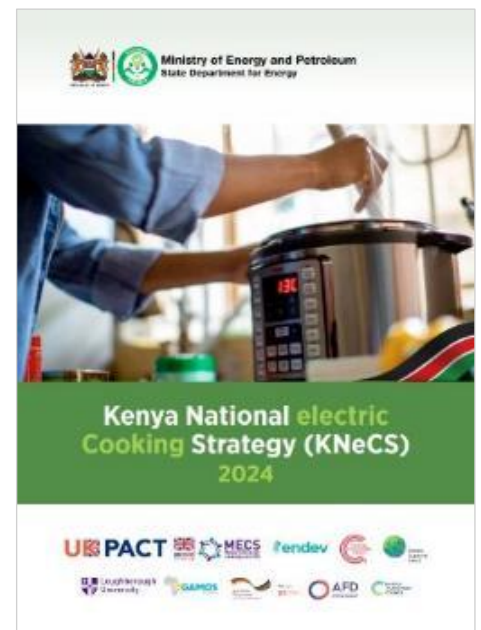
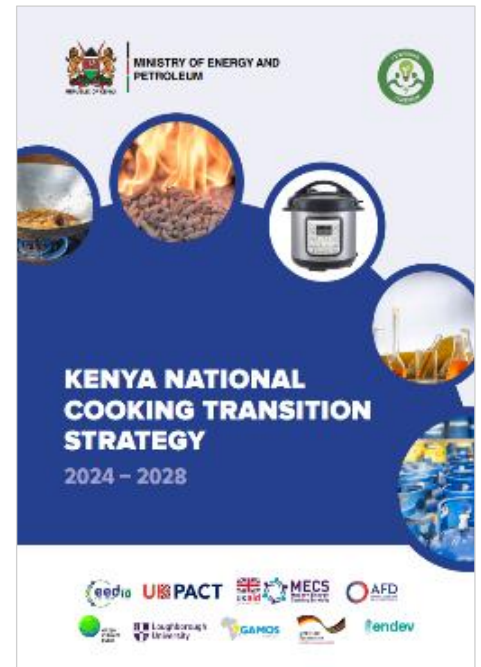


The Kenya National Electric Cooking Strategy (KNeCS 2024–2028) leverages rapid electrification progress (20% to >75% in 10 years) to accelerate institutional and household clean cooking adoption.

### Diversity



Multiple solutions already deployed at scale in the marketplace, with a diversified fuel mix targeted by the KNCTS, including LPG, bioethanol, electricity, biogas and sustainable biomass.



Source: KNCTS (2024-2028), KNeCS (2024-2028)

# The Institutional Clean Cooking Opportunity



There are an estimated **~620,000 primary & secondary schools across Africa**, with about 130M primary & secondary students in SSA.



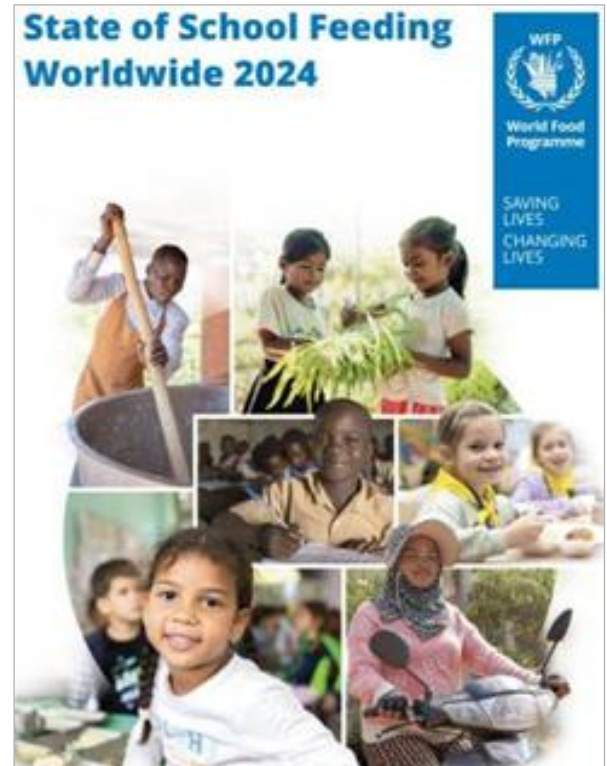
About 87 Million children across SSA are receiving school meals under the Government-led National School Meals Program.



The SSA region also hosts 98,745 public healthcare facilities, with significant proportion providing in-patient services.



In 2022, there were 951,000 inmates across SSA prisons, all of whom required feeding.



Traditional cooking methods - charcoal/firewood stoves utilized in most of the institutions: > 85% of schools in SSA, consuming 8M tons of firewood per year, emitting 12 tCO<sub>2</sub>e.



Transitioning institutional kitchens offers opportunity for high-impact, scalable entry point, & aggregated energy demand, supporting SDG 3, 7 and 13.

Source: UNODC – Global Prison Population & Trends (2024); OCHA HDX – Health Facilities in SSA (2024); WFP - 20 million more children in Sub-Saharan Africa now receive government-led school meals (2025); UNESCO – Global Education Monitoring Report (2023); COL (2023) – Sharing Open Resources: The Footprints of COL in SSA; GCNF, 23<sup>rd</sup> Annual Global Child Nutrition Forum (2022); ESMAP, The State of Clean Cooking Energy Access in Schools: Insights from an Exploratory Study (2023)

# Why Kenya is the Right Place for Institutional Clean Cooking

Kenya has over **97,000** educational institutions, over **13,000** healthcare facilities and **over 130** correctional facilities nationwide.

**>90%** of schools and healthcare facilities, and **>99%** of correctional facilities rely on firewood/charcoal, creating significant aggregated demand for institutional clean cooking solutions.

LPG, electric cooking, efficient biomass and biogas solutions have proven scalable in institutional settings, reducing costs, improving health outcomes and lowering emissions.

Successful institutional clean cooking technologies have been piloted with great success:

- NACONEK has piloted LPG steam-based institutional kitchens in public schools
- E-cooking solutions have been piloted in select public institutions.
- LPG technology has been piloted in one of the prisons, providing technology and business model proof.
- Local Financial Institutions (LFIs) are actively providing innovative financing solutions for institutions, particularly schools.



Source: SEforAll - Powering Healthcare (2026); ESMAP & WFP – The State of Cooking Energy Access in Schools (2023); KNBS, MoEd and State Department for Planning - Kenya School Census Report (2024, unpublished); MoH, KNBS, AMREF - National Health Census Report 2023; Kenya Prisons Service; Ministry of Interior - State Department for Correctional Services

## Ecosystem overview



The Ministry of Energy & Petroleum (MoEP) developed the blueprint for the cooking sector's multi-fuel transition (KNCTS, 2024-2028) and integration with the electricity sector (KNeCS, 2024-2028). MoEP hosts the Clean Cooking Implementation Unit (CCIU), which oversees the implementation of these strategies.



The Office for the Special Envoy on Climate Change (OSECC) hosts the Clean Cooking Delivery Unit (CCDU), which focusses on mobilising finance for institutional cooking transitions.



Line Ministries (Education, Interior and Health) and Country Governments work with MoEP to enable clean cooking transitions within the institutions under their respective mandates.



Private sector players produce, manufacture, assemble, import and distribute cooking fuels and devices.



Financial institutions catalyse the supply chain by:

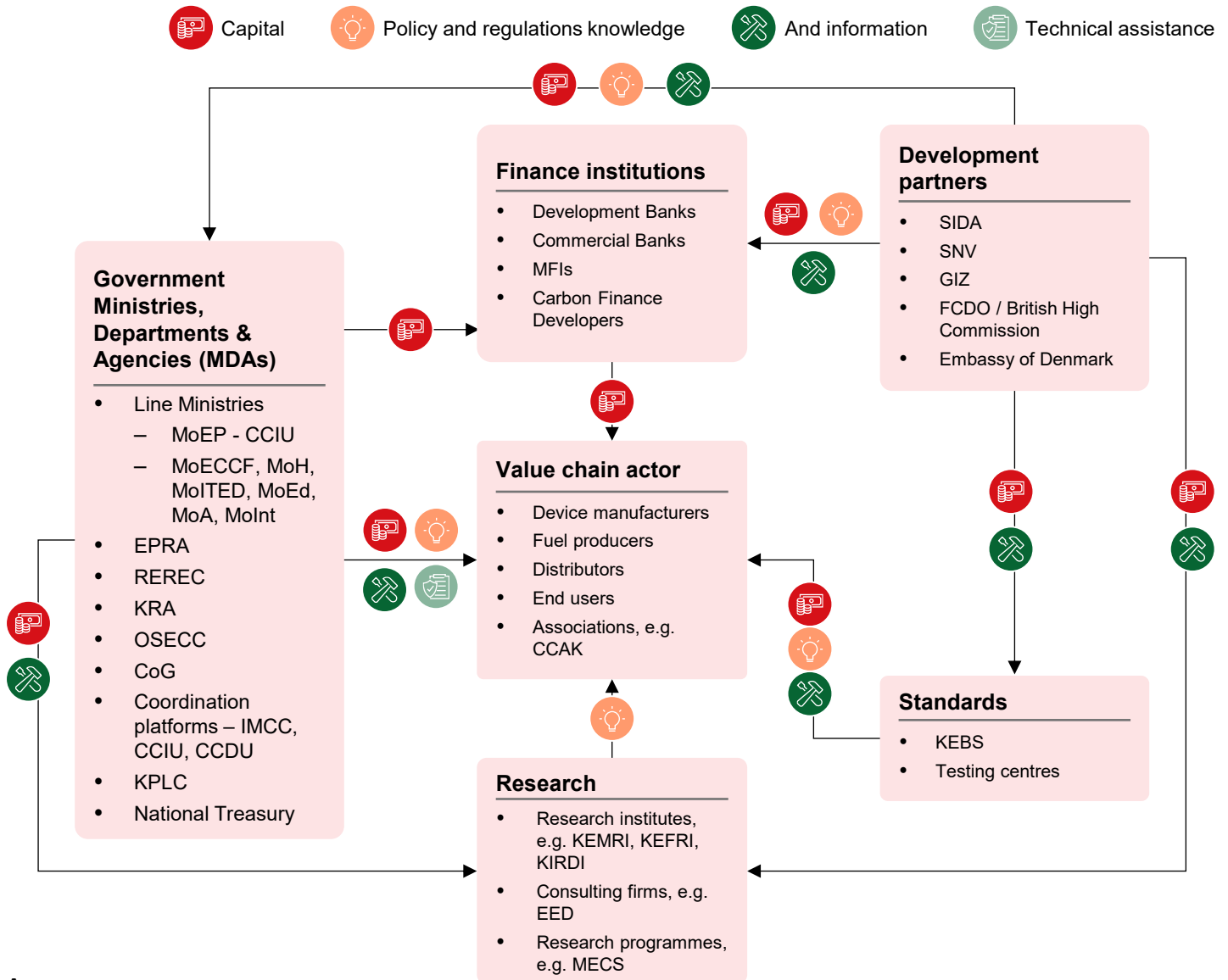
- lending to consumers to reduce the upfront cost barrier
- lending to or investing in private sector players to enable acquisition of inventory, customer acquisition and product/service development



Development partners support the sector by:

- aligning the enabling environment
- activating consumer demand
- supporting supply chain development

# Ecosystem overview



## Acronyms

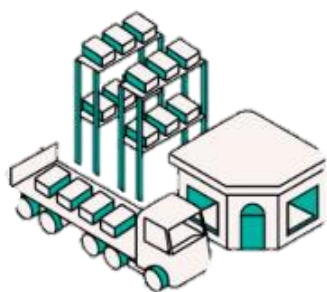
- |   |  |
|---|--|
| <b>MoEP</b> – Ministry of Energy & Petroleum  | <b>KRA</b> – Kenya Revenue Authority                       |
| <b>CCIU</b> – Clean Cooking Implementation Unit                                     | <b>MFIs</b> – Micro Finance Institutions                   |
| <b>OSECC</b> – Office of the Special Envoy for Climate Change                       | <b>KIRDI</b> – Kenya Institute of Research and Development |
| <b>CCDU</b> – Clean Cooking Delivery Unit   | <b>MOA</b> – Ministry of Agriculture                       |
| <b>IMCC</b> – Interministerial Committee on Clean Cooking                           | <b>COG</b> – Council of Governors                          |
| <b>MoECCF</b> – Ministry of Environment, Climate Change and Forestry                | <b>CCAK</b> – Clean Cooking Association of Kenya           |
| <b>MoH</b> – Ministry of Health   | <b>KEFRI</b> – Kenya Forest Research Institute             |
| <b>MoITED</b> – Ministry of Trade Industrialization, Trade & Enterprise Development | <b>KEMRI</b> – Kenya Medical Research Institute            |
| <b>MoEd</b> – Ministry of Education   | <b>KPLC</b> – Kenya Power Lighting Company                 |
| <b>KEBS</b> – Kenya Bureau of Standards   | <b>MECS</b> – Modern Energy Cooking Services               |
| <b>EPRA</b> – Energy & Petroleum Regulatory Authority                               |  |
| <b>REREC</b> – Rural Electrification and Renewable Energy Corporation               |  |

Source: KNCTS

# Value Chain Overview

The clean cooking sector is a collection of diverse subsectors. Each one has its own unique value chain, each of which presents distinct innovations, opportunities, risks, advantages, and limitations.

The value chains for the five most commercially promising subsectors for institutional cooking are shown in the following section: Biogas, LPG, Bioethanol, Electricity, and Improved Biomass.



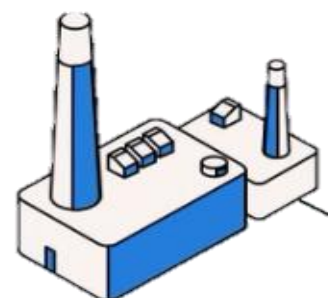
**Stove storage distribution and sales**

Pioneering institutional cooking companies have developed innovative distribution models to aggregate demand from a portfolio of institutions and deliver solutions tailored to their unique needs.

Local manufacturing of cooking devices is a key gap in the clean cooking ecosystem.

Key cooking sector policy documents (KNCTS, 2024-2028 & KNeCS 2024-2028) identify the need to catalyse local manufacturing of clean cooking devices.

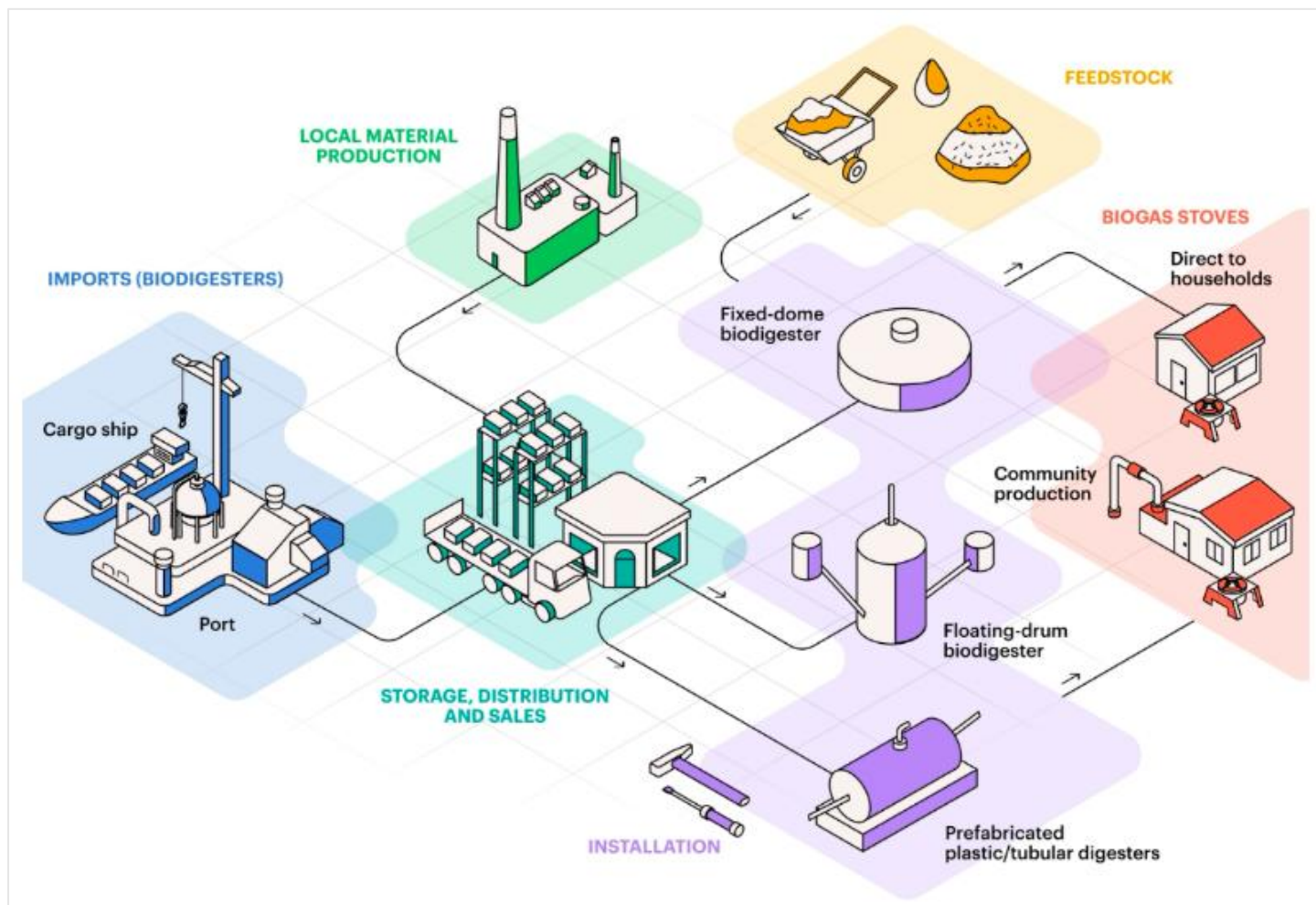
Innovative companies are now manufacturing energy-efficient cooking devices designed specifically for institutional cooking in Kenya, both for the domestic and export markets.



**Stove manufacturing**

Source: IEA & CCA Universal Access to Clean Cooking in Africa (2025)

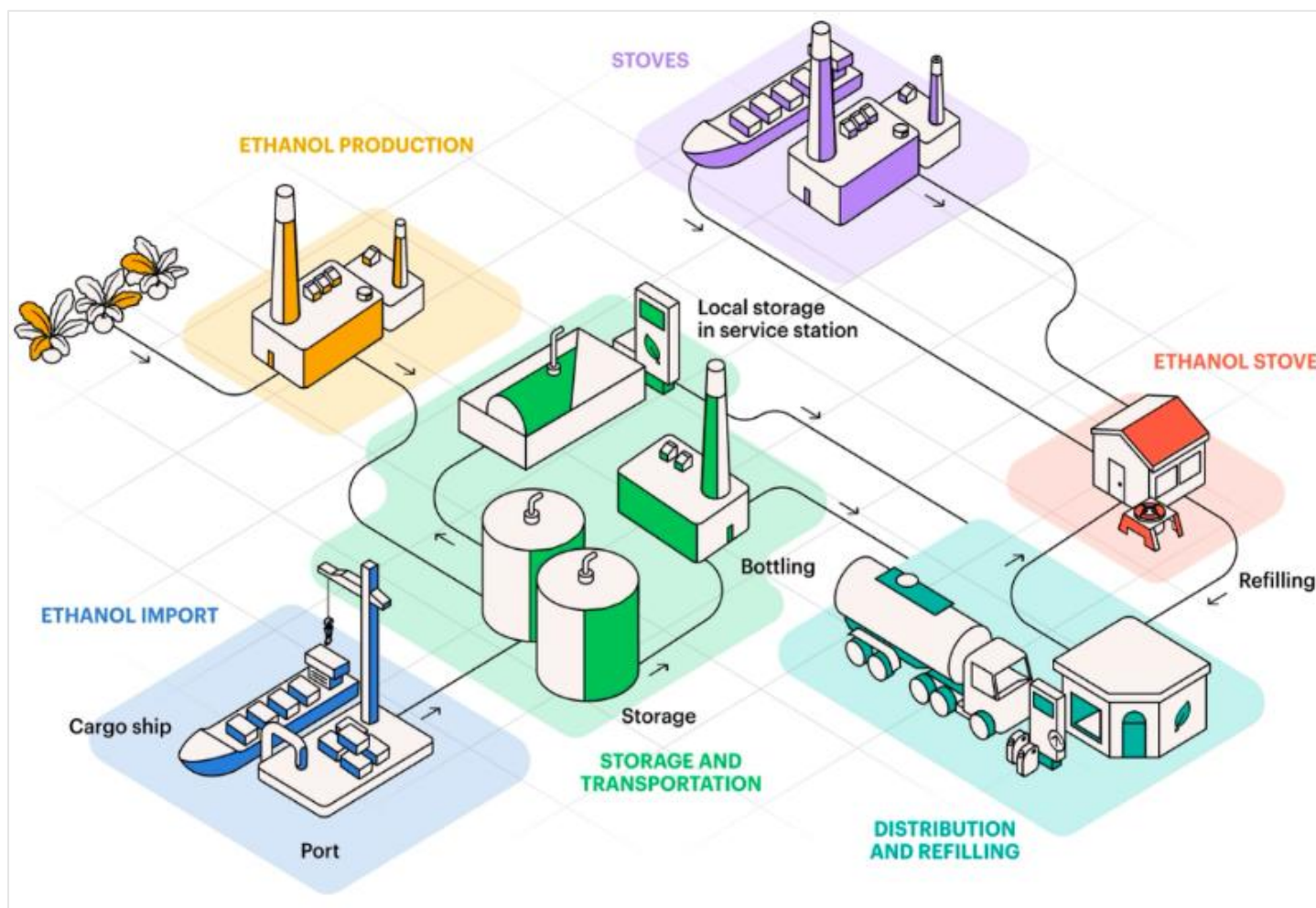
## Value Chain Overview - BIOGAS



- Biodigesters convert organic waste materials into combustible methane gas, known as biogas, which can be used for clean cooking, as well as for other electrical needs. The residue of the process – bio-slurry – can be used as an organic fertilizer.
- Biodigesters can be imported or fabricated locally, but the feedstock is almost always locally sourced. Biogas typically supplies cooking demand on site, as it is difficult to compress for transportation.

Source: IEA & CCA Universal Access to Clean Cooking in Africa (2025)

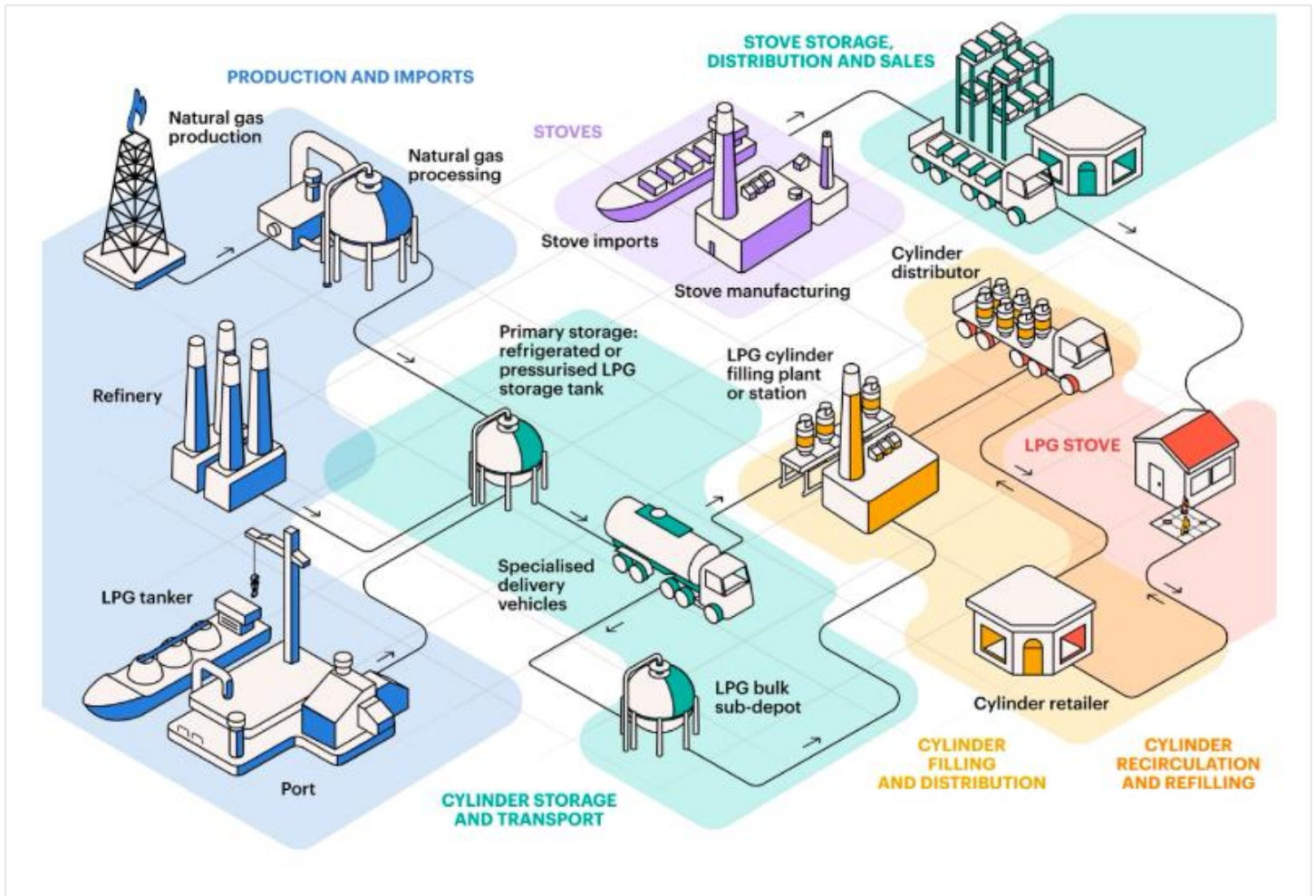
## Value Chain Overview - Bioethanol



- Ethanol is a clean-burning alcohol fuel produced from crops and their byproducts, such as sugarcane, sugar beets, sweet sorghum, cassava, potatoes or maize.
- Demand for ethanol in Kenya currently outstrips supply, with the balance imported from the US, Brazil and other markets as local production scales up to meet demand.

Source: IEA & CCA Universal Access to Clean Cooking in Africa (2025)

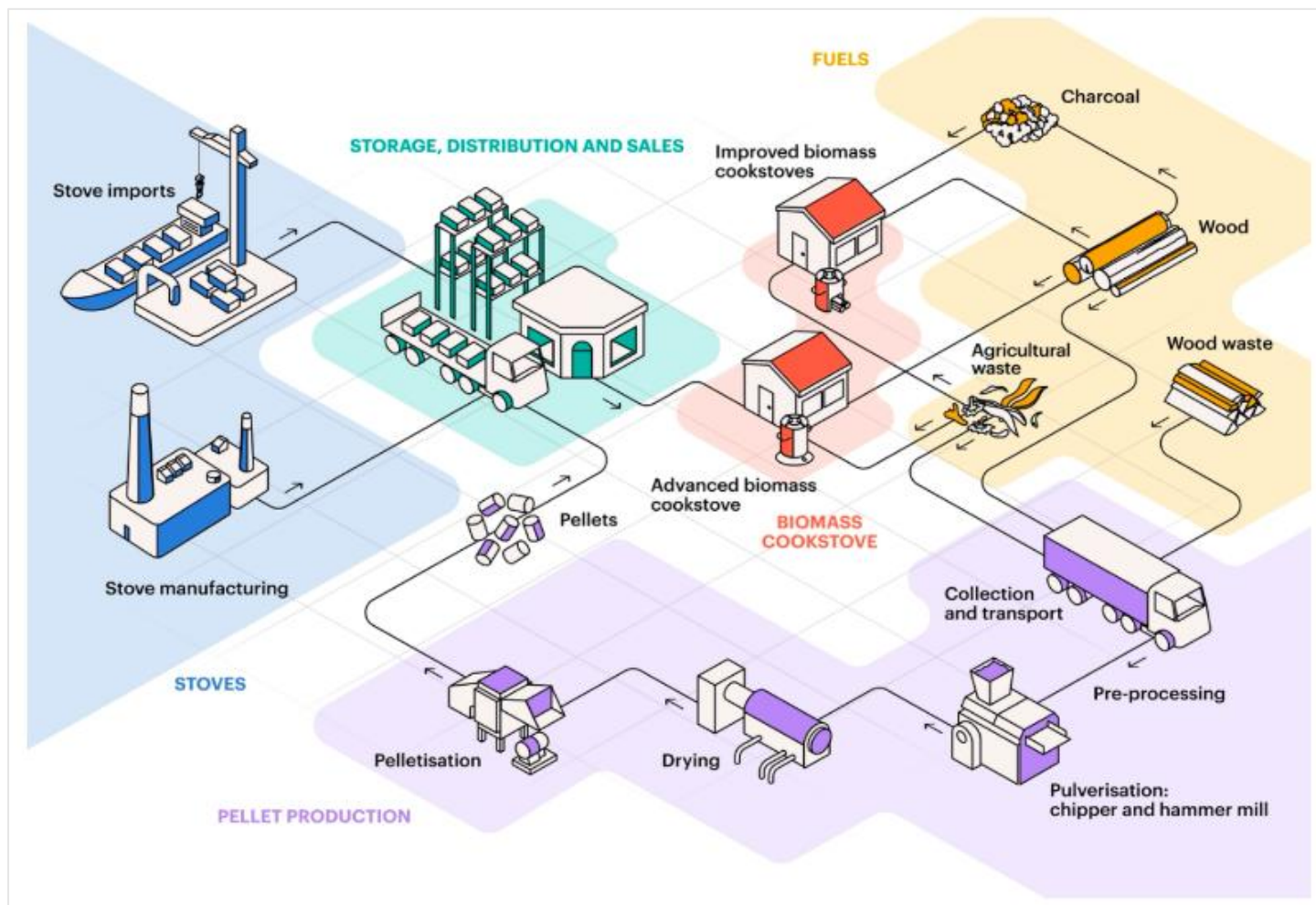
# Value Chain Overview - LPG



- Liquefied Petroleum Gas (LPG) is a fossil-based, clean-burning fuel with high energy density that enables distribution of compressed gas in cylinders.
- LPG has been the driving force behind clean cooking access in Kenya in the last decade. It is a key transition fuel that can enable a transition away from biomass and act as a steppingstone towards renewable fuels/technologies.
- The LPG supply chain is a complex web of upstream and downstream actors, with major Oil Marketing Companies (OMCs) often vertically integrated along the supply chain.

Source: IEA & CCA Universal Access to Clean Cooking in Africa (2025)

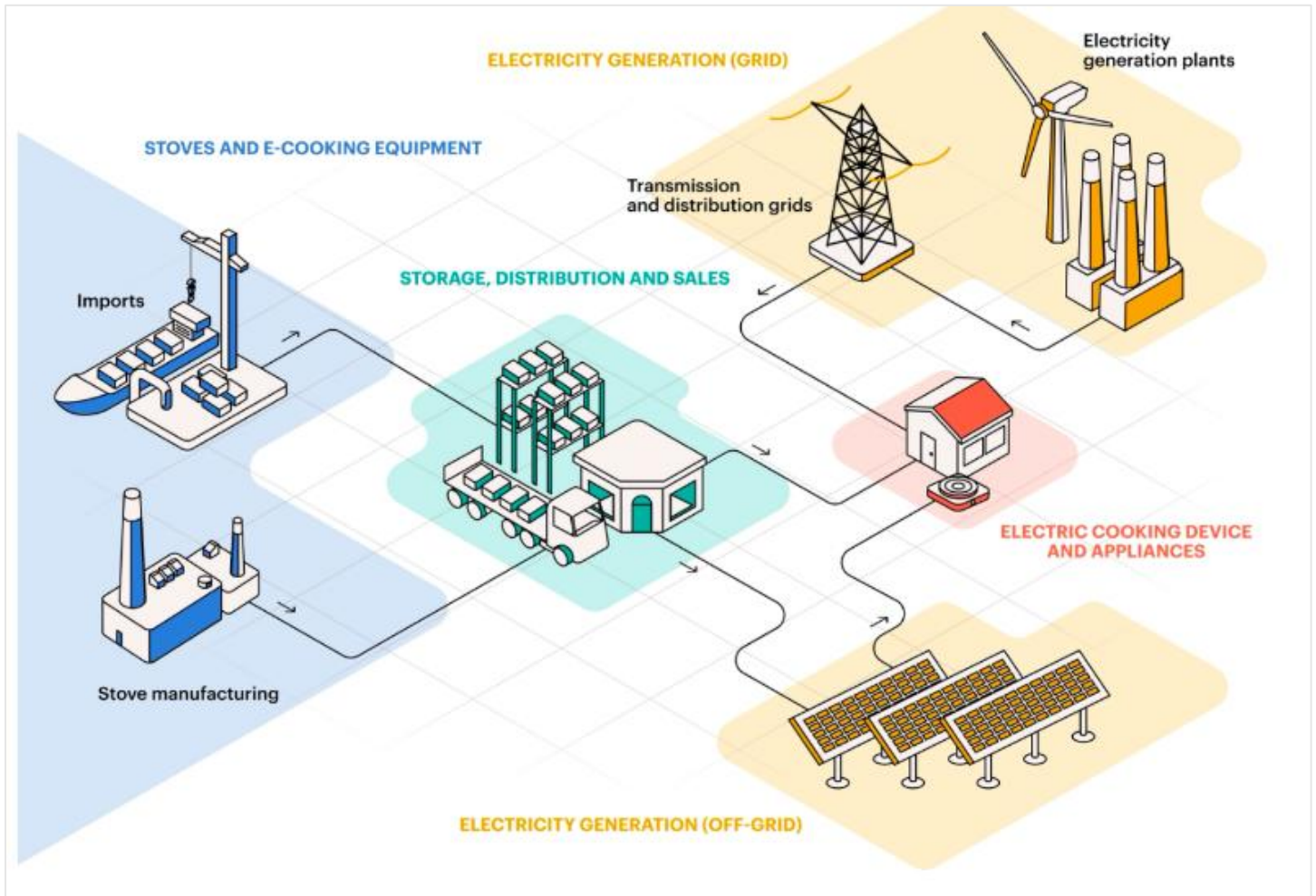
## Value Chain Overview – Improved Biomass



- Solid biomass fuels are almost always sourced locally, and improved cookstoves can be manufactured by local artisans, however advanced cookstoves are often imported.
- Companies offering improved biomass solutions include those selling fuels such as pellet or briquettes, and those making or selling improved biomass cookstoves.
  - **Pellets** are a standardized type of woodfuel that is suitable for burning in highly efficient and clean burning gasifier cookstoves.
  - **Briquettes** offer a more sustainable solid fuel option than firewood or charcoal as they can be manufactured from waste material such as sawdust or bagasse from the timber or sugar industries.

Source: IEA & CCA Universal Access to Clean Cooking in Africa (2025)

## Value Chain Overview – Electricity



- A broad range of energy-efficient appliances, such as Electric Pressure Cookers (EPCs), eBoilers and induction stoves are available for cooking with both Alternating and Direct Current (AC & DC).
- These energy-efficient products can enable eCooking on weak grids, mini-grids, and stand-alone systems, as well as on KPLC’s national grid.
- Electricity itself is increasingly being produced from renewable sources. In Kenya today, the grid electricity mix is over 90% renewable.

Source: IEA & CCA Universal Access to Clean Cooking in Africa (2025)

# Technology Pathways

Institutional cooking is typically delivered through one of two technology pathways: centralized or decentralized systems.

Both pathways can deliver clean, efficient cooking outcomes, but they differ in infrastructure requirements, scale economics, operational complexity, and deployment strategy.



## Decentralised Systems

Meals are prepared on-site at individual institutions using modular, medium to high-capacity cookers powered by electricity, LPG, or biomass briquettes/pellets. This approach prioritizes proximity, flexibility, phased deployment, and localized operational control.

- **Typical cooking technologies:** High-capacity (typically 50–500L) electric cookers, LPG, biomass pellet/briquette stoves.
- **Best fit:** Smaller primary/secondary schools; faith-based institutions;
- **Value:** 50–70% faster & lower energy; modular; quick deployment.
- **Enables:** Leasing/PAYG models; standard wiring upgrades; daytime load shifting.



## Centralised Systems








Meals are prepared in a single, large-scale kitchen using high-throughput equipment and distributed to multiple feeding points. This approach prioritizes scale, operational efficiency, standardization, and cost optimization at high volumes.

- **Typical cooking technologies:** Electrified or hybrid (solar and/or LPG) steam boilers feeding kettles/ovens via insulated piping.
- **Best fit:** Correctional facilities; hospitals; large boarding schools; tertiary institutions; cluster cooking model
- **Value:** Very high throughput; hygiene; lower lifecycle cost at scale.
- **Examples**
  - **Food 4 Education (Giga Kitchen & Hubs)**  
Operates large-scale, mechanized kitchens (including the 60,000-meal Giga Kitchen) across Nairobi, Kiambu, and Mombasa.
  - **Mercy Kitchens – Nairobi County**  
A network of modern institutional kitchens serving children in public primary schools in Nairobi, Kenya.
  - **NACONEK (ASAL Counties)**  
Deploys centralized clean-energy steam cooking systems for school feeding in arid and semi-arid areas, improving efficiency and significantly reducing firewood dependence.
- **Enables:** EaaS/service contracts; centralised kitchens; rigorous O&M.



# Technology Pathways




The table below compares the primary clean cooking technology options for institutional kitchens across key decision criteria: upfront investment, operating cost, fuel savings versus firewood, indicative payback period, and carbon credit potential. This provides a practical framework for evaluating trade-offs between cost, scalability, and environmental impact when selecting the most appropriate pathway.

| Fuel/Technology  | Initial Setup Cost | Operational Cost | Typical savings vs Firewood        | Indicative Payback (yrs) | Carbon Credit Potential                                    |
|--|--------------------|------------------|------------------------------------|--------------------------|--|
|  <b>Firewood (baseline)</b>                   | N/A                | High             | 0% (baseline)                      | N/A                      | N/A (emitting baseline)                                    |
|  <b>Grid-Electric</b>                         | Medium             | Low              | 50–70% savings                     | ≈1–3                     | High (strong dMRV and metering)                            |
|  <b>Solar-Electric</b>                      | High               | Low              | 60–90% savings (sizing dependent)  | ≈3–6                     | Very High (renewable + displacement)                       |
|  <b>Steam Systems (Electric/LPG Hybrid)</b> | High               | Low              | 30–60% savings                     | ≈3–5                     | High (when displacing biomass)                             |
|  <b>LPG</b>                                 | Medium             | Medium           | 20–40% savings                     | ≈3–5                     | Medium (biomass displacement but CO <sub>2</sub> positive) |
|  <b>Biomass Pellets / Briquettes</b>        | Low                | Low–Medium       | 50–70% savings (context dependent) | ≈2–4                     | Medium–High (methodology dependent)                        |
|  <b>Biogas</b>                              | High               | Low              | 40–70% savings                     | ≈2–5                     | High (methane avoidance + displacement)                    |

Source: CLASP




## Business & Financing Models

The table below outlines the core commercial models through which institutional clean cooking solutions are deployed and paid for. These structures determine how upfront capital is financed, how providers recover costs over time, and how performance and operational risk are allocated between the institution and the service provider.

| Model  | Definition & Payment Plan   | Contract / Cash Flow  | Best-fit Use Cases   | Companies/ Programmes (Kenya)                               | Strengths  | Risks / Watch-outs   |
|--|---|---|--|---|--|--|
| <b>Energy-as-a-Service (EaaS)</b><br>         | Provider finances, installs, operates & maintains cooking system; institution pays periodic service fee (per meal/uptime/month). Ownership may transfer at end. | Multi-year (3–10y); provider recovers CAPEX via service fees, often blended with carbon/RBF.        | Prisons, large boarding schools, hospitals; steam or large EPC fleets with O&M needs.        | Ignis Innovations<br>Faith Energy Saving Engineering Works. | Zero CAPEX for user; professional O&M; measurable performance enabling carbon revenue. | Counterparty credit & procurement timelines; tariff must cover lifecycle costs; energy price risk if unhedged. |
| <b>Leasing / Lease-to-Own (PAYS)</b><br>    | Institution leases EPC/ancillaries; repayments aligned to fuel savings; ownership passes at term end.   | 2–5y lease; monthly/termly payments; often includes basic training/O&M.                             | Decentralised school kitchens; fast EPC deployment where grid exists; faith-network schools. | Feion Green Ventures.<br>Ecobora.                           | Low upfront cost; quick rollout; “pay from savings” narrative.                         | Savings realisation depends on practice change; wiring upgrades; cash-flow discipline.                         |
| <b>PAYG / Pay-As-You-Cook (metered)</b><br> | IoT-metered appliances; usage-linked micro-payments unlock device use; often subsidised by carbon.  | Prepaid/rolling top-ups; provider recovers CAPEX over time; carbon credits via metered methodology. | Institutions preferring variable spend; hostels; mixed EPC /induction suites.                | BURN Manufacturing.<br>Ecobora.                             | Aligns cost with usage; strong dMRV; inclusive access.                                 | Connectivity/device management; tariff must balance affordability & cash-flow.                                 |

## Business & Financing Models

Building on the core commercial models above, this table highlights enabling financing mechanisms that can accelerate scale — including aggregated procurement, concessional credit, and public CapEx funding. These pathways mobilize capital at programme level and can be layered onto EaaS, leasing, or PAYG structures to reduce risk, lower cost of capital, and unlock wider adoption.

| Model  | Definition & Payment Plan   | Contract / Cash Flow   | Best-fit Use Cases  | Companies/ Programmes (Kenya)   | Strengths  | Risks / Watch-outs   |
|--|---|--|---|---|--|--|
| <b>Aggregated Procurement (County/ Faith/ Donor)</b><br>   | Aggregator pools demand, standardises specs & pricing; institutions adopt via EaaS/ lease/purchase. | Framework agreement; batch installations; often paired with concessional finance or RBF. | County-wide school conversions; faith-led portfolios; multi-facility operators.                     | KNeCS Action Plan encourages programme approaches; used in MECS-aligned pilots. | Scale economies; simpler training/O&M; easier monitoring & verification. | Requires strong PMO; rigid specs may reduce site tailoring.                              |
| <b>Concessional Bank Finance / Green Credit Lines</b><br> | Local bank soft loans/blended facilities for institutional upgrades; sometimes with grants.         | Illustrative: 70% loan + up to 30% grant; repaid from operating budgets.                 | Schools/faith institutions with credit history; CAPEX purchase or co-finance alongside EaaS/leases. | KCB Clean Energy Financing for schools.   | Simple structure; familiar to boards; combines with aggregation.         | Interest-rate/collateral requirements; O&M performance not guaranteed unless contracted. |
| <b>Public Procurement / CapEx Grants</b><br>              | Government/ donor funds outright purchase & installation; host covers O&M post-handover.            | One-off CAPEX; annual budgets for maintenance & energy; carbon can be layered later.     | Public schools/ hospitals; flagship pilots where fiscal space exists.                               | Referenced in KNeCS Action Plan as an implementation pathway.                   | Fast when funds exist; full public ownership.                            | O&M quality varies; limited performance accountability unless SLAs added.                |

## Financing needs

Kenya's institutional cooking sector has diverse funding needs to support companies at different stages of growth to scale.

These include:



**Debt and equity** on concessional rates from DFIs, private sector and government for working capital and expansion.



**Green bonds & Crowdfunding:** These have emerged as niche tools for mature and earlier-stage companies respectively to raise flexible capital from the public.



**Venture Capital** can offer the ability to rapidly scale the most promising enterprises by providing room for growth and innovation.



**Innovation Funding and Catalytic Grants:** To provide opportunities for early-stage companies to establish innovative new ventures and established enterprises to explore new products or business models that improve accessibility and affordability.



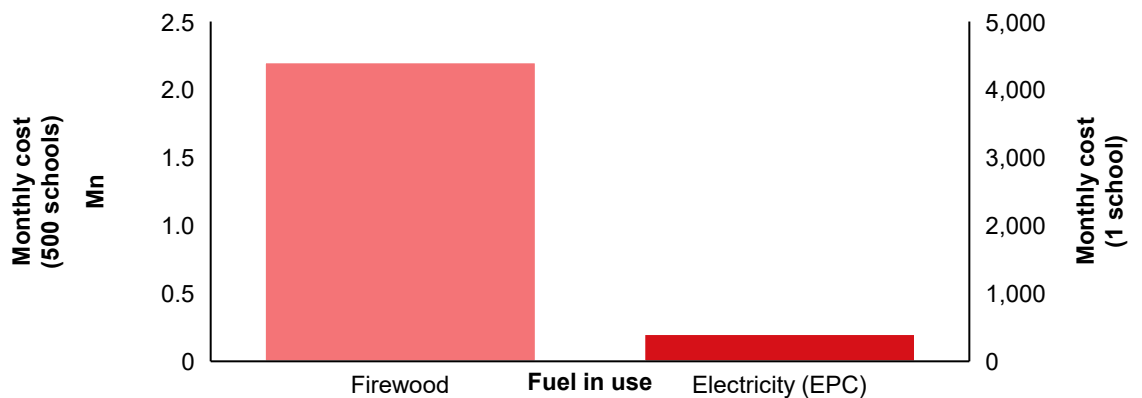
**De-risking instruments and guarantees** provided by public/philanthropic funds can enable private capital to flow. Risk-sharing mechanisms can encourage commercial banks to lend to clean cooking companies at single-digit rates. These specialized funds/instruments also fill the "missing middle" for companies that have outgrown seed grants but are not yet ready for large-scale commercial debt.

# Financing needs

**Carbon finance** is increasingly being used to bridge the affordability gap, stimulate innovation and incentivize the sustained use of institutional cooking devices. Carbon credits offer an ongoing revenue stream that can be used to offset fuel costs, O&M costs and/or the cost of the food itself. However, development of carbon projects requires upfront investment and a carefully designed business model capable of capturing high integrity data on the real usage of the new cooking technologies.

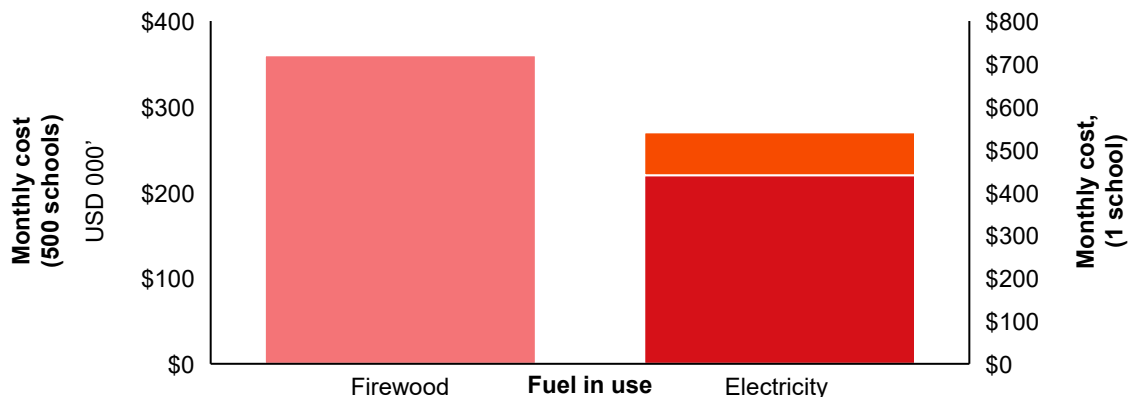
The example below shows that the monthly cost of cooking with electricity can be partially offset by the carbon credits generated from a firewood to electric transition, as Kenya's grid electricity mix is already ~90% renewable<sup>1</sup>.

## Monthly kgCO<sub>2</sub>e emissions from cooking

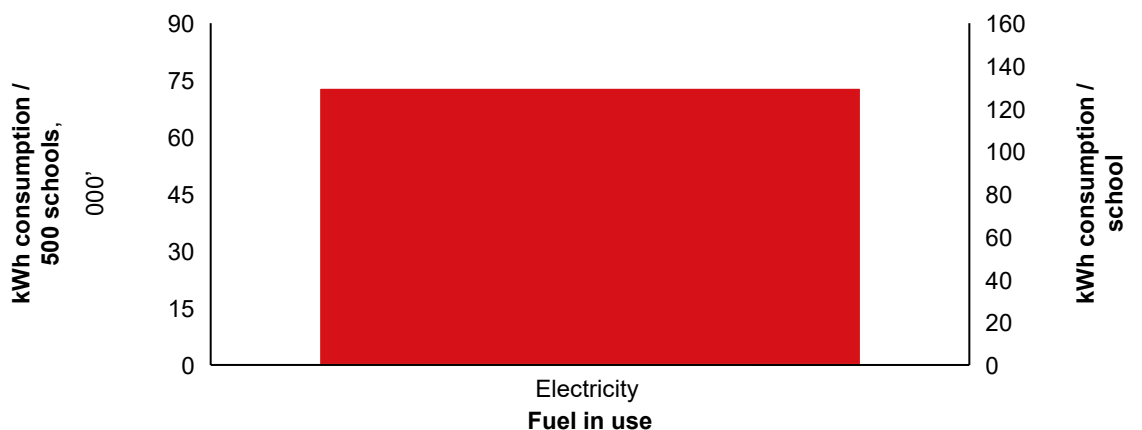


## Monthly cost of fuel used for cooking carbon value at \$20/tonne

Can be recouped with carbon credits



## Estimated kWh consumption/day/school



**Outcome-based finance** is gaining traction more broadly; monetisation of the health and gender benefits (in addition to CO<sub>2</sub> reduction) present a huge opportunity for generating additional revenue streams.

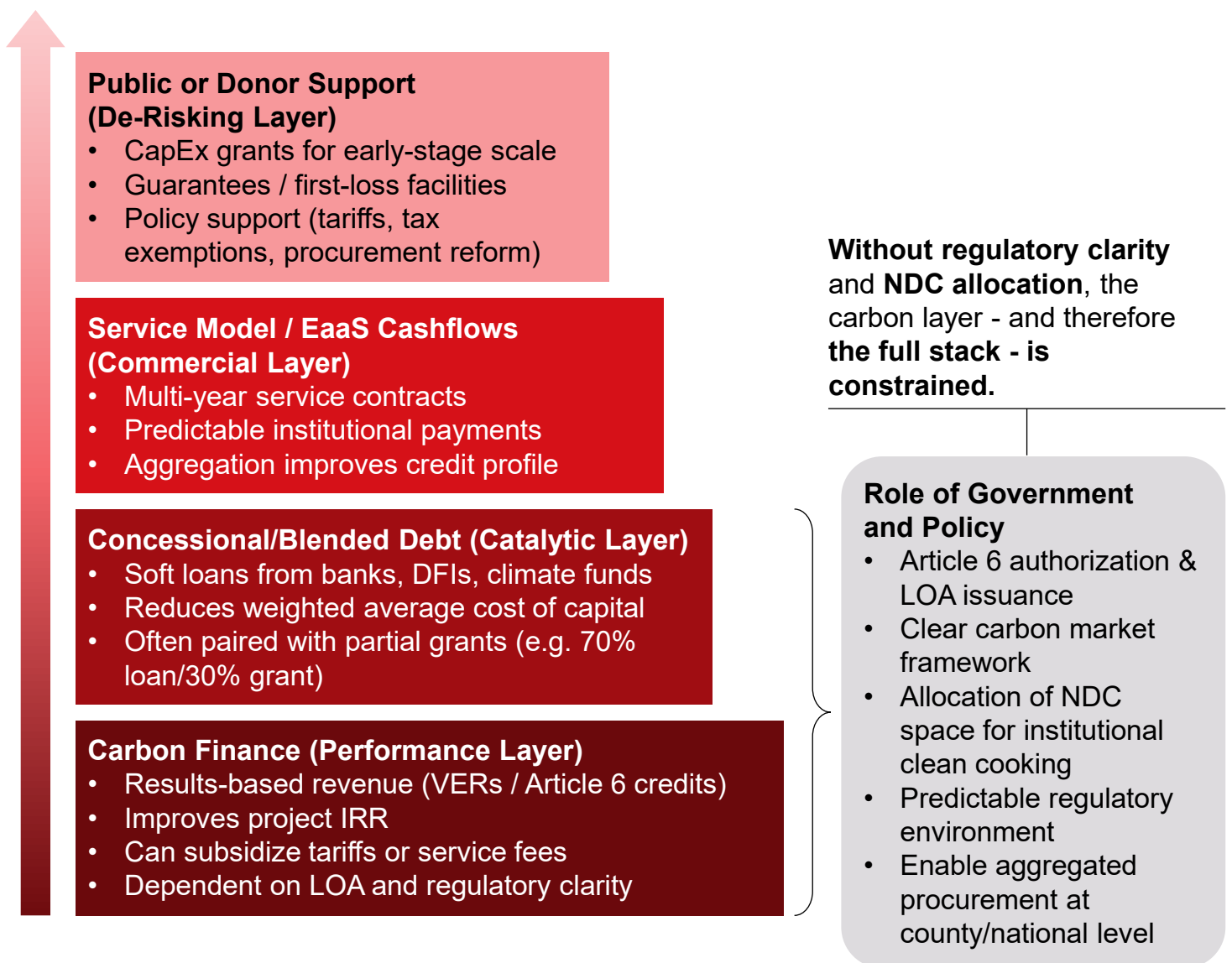
1. Relative costs and emissions modelled for a firewood to EPC transition for a portfolio of 500 schools, each with around 750 students.

Source: MECS

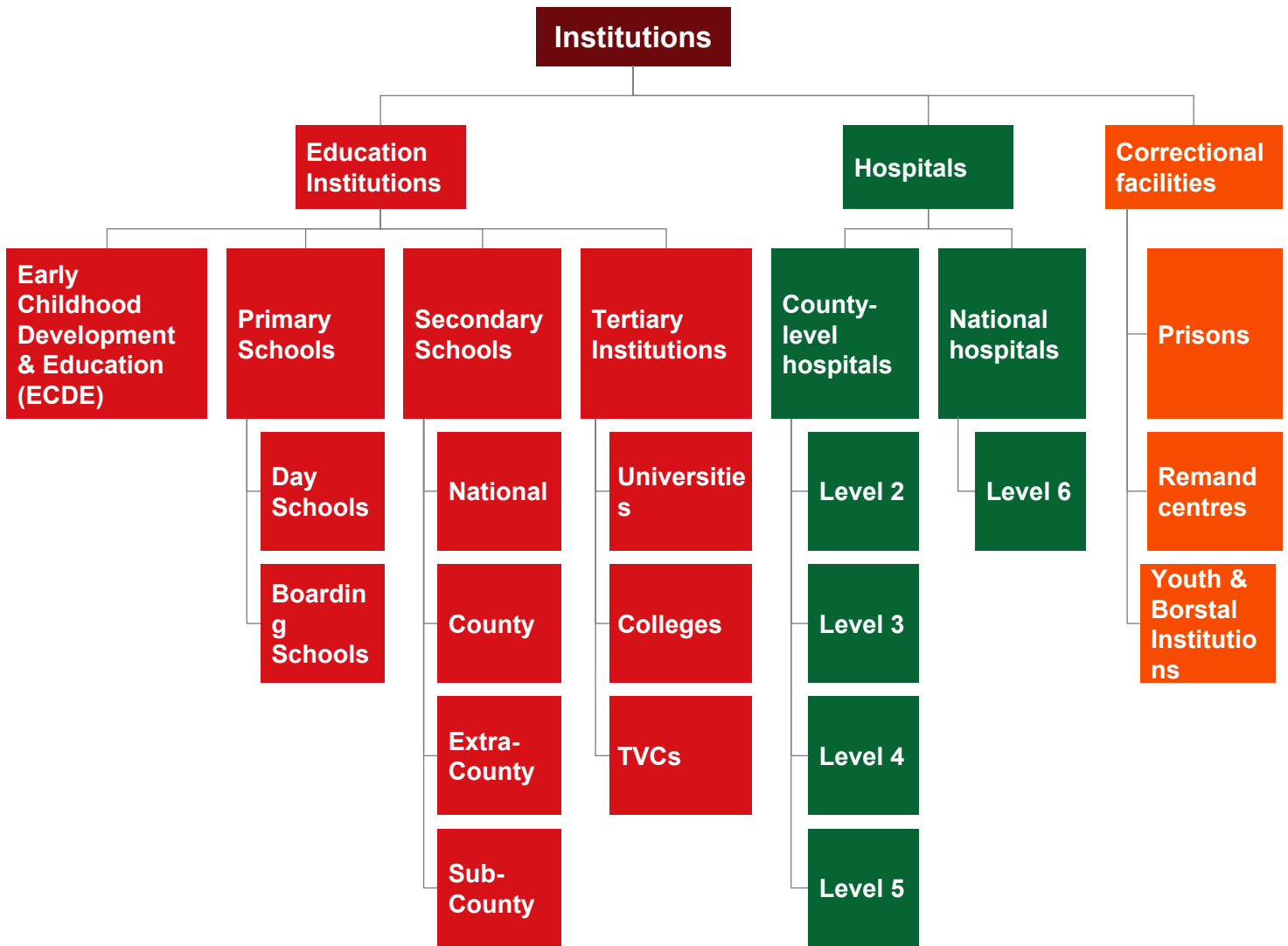
# Capital stacking

## Why Capital Stacking Matters

Scaling institutional clean cooking requires blending multiple capital layers to reduce risk, lower cost of capital, and unlock bankability. No single instrument is sufficient at scale.



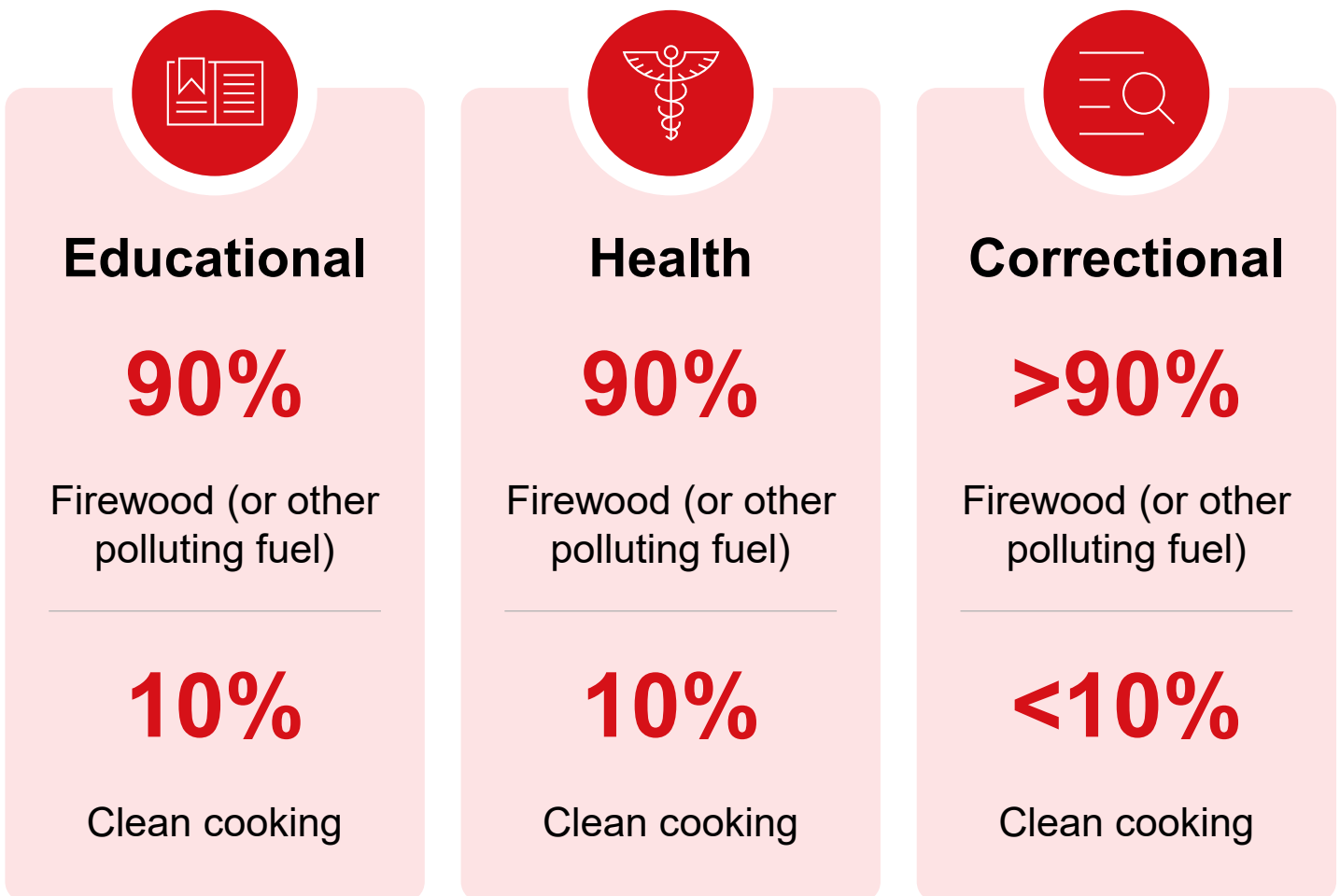
# Key Institutional Market Segments in Kenya



- Social institutions with significant cooking demand include educational institutions, hospitals and correctional facilities
- The education segment spans ECDE, primary, junior & senior secondary, universities, colleges & TVETs
- Health segmented by Kenya Essential Package for Health (KEPH) classification. Level 2-5 overseen by County and Level 6 national referral hospitals. In-patient services only in levels 3-6
- Correctional facilities include prisons, remand centres, and youth/borstal institutions

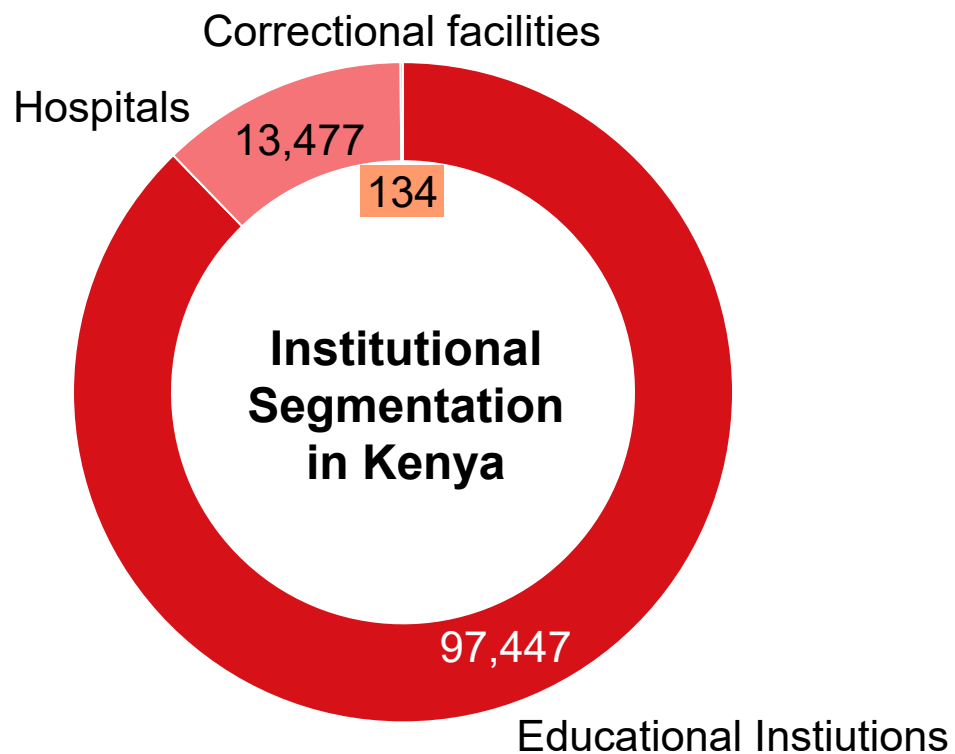
# Institutional Clean Cooking Transition Status

Kenya’s institutional clean cooking sector lags behind the household cooking sector, with the vast majority of institutions still cooking primarily with firewood. Whilst the KNCTS (2024-2028) reported that over 31% of households now cook primarily with clean cooking fuels and technologies, aggregated data from across the education, health and correctional market segments suggests that only around 10% of institutions have transitioned to clean cooking.



Source: SEforAll - Powering Healthcare (2026); Kenya Prisons Service; ESMAP & WFP – The State of Cooking Energy Access in Schools (2023)

# Market Overview: Institutional Market Segments



In Kenya, there are **over 100,000 institutions**, the majority of which fall into the following three categories:



**Educational institutions** dominate overall demand, accounting for almost 90% of institutional cooking sites, with more than 90,000 public and private ECDEs, primary, secondary schools and TVETs serving an estimated 10+ million learners.



**Health facilities** represent a critical secondary segment, with over 13,000 public and private facilities serving millions of patients.



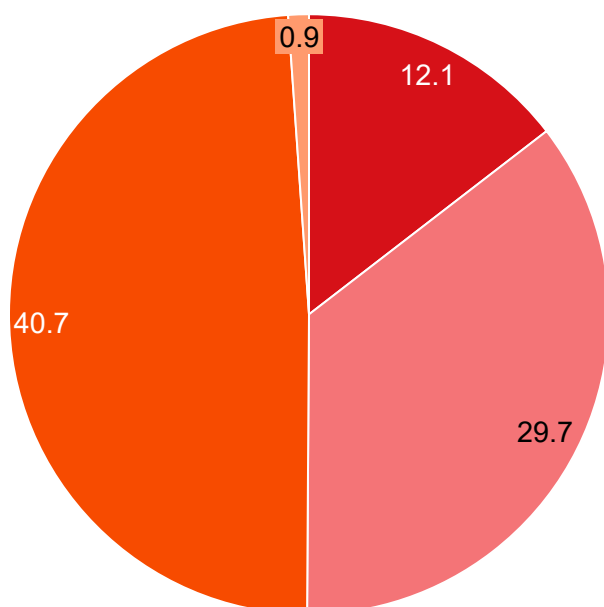
**Correctional facilities** constitute a smaller but highly concentrated segment, with 134 prisons serving ~80,000 inmates and staff.

Source: KNBS, MoEd and State Department for Planning - Kenya School Census Report (2024, unpublished); MoH, KNBS, AMREF - National Health Census Report 2023; Kenya Prisons Service; Ministry of Interior - State Department for Correctional Services

## Sub-segmentation of educational institutions

### Investment needs per market segment, (KES, Bn)

■ ECDEs, KES    ■ Secondary, KES  
■ Primary, KES    ■ TVETs, KES



- At over KES 40b / \$313m, secondary schools have the highest investment need within the educational sector. Whilst ECDEs and Primary schools are more numerous, secondary schools tend to be bigger, with an average of over 400 pupils to feed in each institution.
- TVETs have the smallest investment need at KES 929m/\$93m. National Polytechnics (a sub-segment of TVETs) are the biggest type of educational institution, feeding an average of 4,000 trainees each, however they are very few in number (just 33) and other categories of TVETs are much smaller.
- ECDEs are the most numerous, with over 44,000 in total, however they only feed around 100 pupils per institution, meaning that their total investment needs are lower than primary or secondary at KES 12b/\$93m.

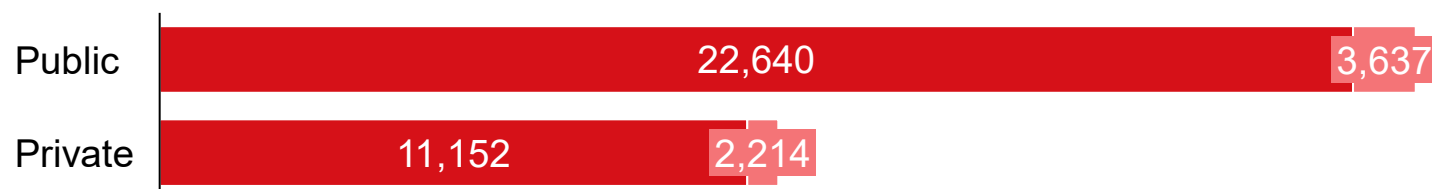
|                  | Investment need      | No. institutions | No. institutions cooking | No. ppl fed | Avg. no. ppl. fed per inst. | Avg. investment per inst. | Avg. invest. per person fed |
|------------------|----------------------|------------------|--------------------------|-------------|-----------------------------|---------------------------|-----------------------------|
| <b>ECDEs</b>     | KES 12Bn<br>\$ 94Mn  | 44,588           | 44,588                   | 2.7Mn       | 112                         | KES 0.3Mn                 | KES 4,497                   |
| <b>Primary</b>   | KES 30Bn<br>\$ 228Mn | 39,126           | 18,163                   | 5Mn         | 274                         | KES 1.6Mn                 | KES 5,964                   |
| <b>Secondary</b> | KES 41Bn<br>\$ 313Mn | 10,734           | 10,734                   | 4.5Mn       | 428                         | KES 3.8Mn                 | KES 8,867                   |
| <b>TVETs</b>     | KES 929Mn<br>\$ 7Mn  | 2,999            | 508                      | 0.2Mn       | 61                          | KES 1.8Mn                 | KES 5,080                   |

Source: KNBS, MoEd and State Department for Planning - Kenya School Census Report (2024, unpublished)

# Sub-segmentation of educational institutions

## Number of Primary

■ Boarding schools ■ Day Schools



- Primary schools represent one of the largest institutional cooking markets in Kenya, with almost 40,000 schools – day, and boarding.
- Boarding schools and school feeding programs drive daily, high-volume cooking demand.
- >90% school kitchens still rely on firewood or other biomass fuels.
- Cooking energy expenditure is recurring, predictable, and already embedded within education budgets.
- Delivers high climate, health, and social impact, with strong eligibility for carbon finance and results-based instruments.

Source: KNBS, MoEd and State Department for Planning - Kenya School Census Report (2024, unpublished); ESMAP & WFP – The State of Cooking Energy Access in Schools (2023)

## School feeding programmes



### **NACONEK Garissa High School Steam Cooking Carbon Asset Infrastructure**

*Photo Credit: NACONEK*



### **Food For Education Giga-kitchen.**

*Photo Credit: Food For Education*

School feeding programmes have been instrumental in providing food to learners, especially primary school students.

The National School Meals Programme (NSMP) overseen by the Ministry of Education through the National Council for Nomadic Education (NACONEK) currently targets 2.6 million learners across 8,000 schools.

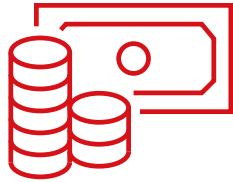
The Government of Kenya (GoK) plans to expand the NSMP to reach 10 million learners by 2030.

Actors like Food For Education currently serving over 600,000 learners a day through centralized and decentralized kitchen model. Programme expanding rapidly but cooking done with firewood in some kitchens

Expansion of school feeding will mean more firewood demanded in the expansion toward cooking for even more learners.

Source: NACONEK, Food for Education

# Annual Expenditure on firewood in Primary and Secondary Schools



**KES 4.35B**

Secondary Schools



**KES 1.6B**

Primary Schools

Primary schools consume ~274,800 tonnes of firewood annually, while secondary schools consume ~725,327 tonnes, reflecting the large scale of institutional cooking demand across the education sector.

Kenyan primary and secondary schools collectively spend approximately KES 6 billion annually on firewood, assuming an average price of KES 6,000 per tonne.

Spending represents a recurring operational cost embedded in school budgets, presenting a clear opportunity to redirect existing expenditure toward clean cooking transitions and infrastructure investments.

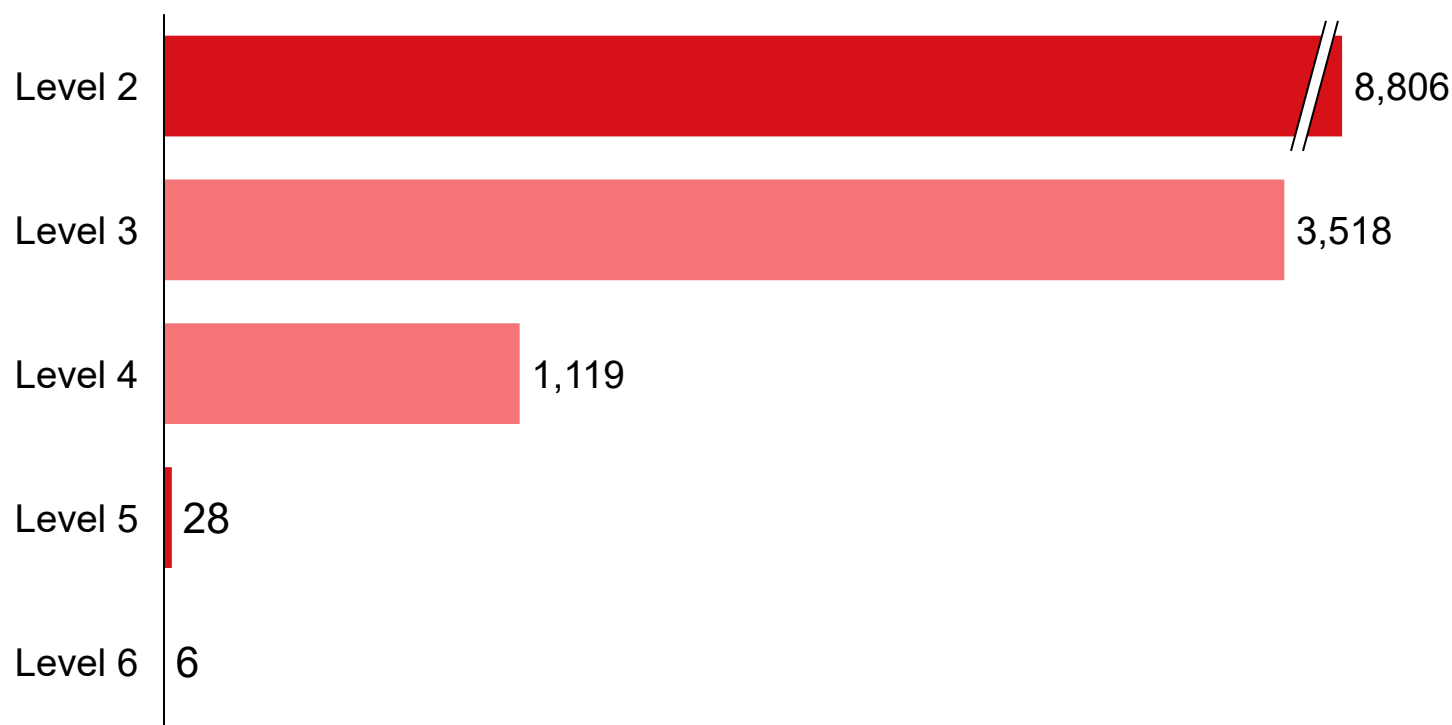
Secondary schools account for the majority of this expenditure (KES 4.35B), reflecting the large number of boarding institutions and higher cooking intensity.

Primary schools contribute about KES 1.65B in annual firewood expenditure.

Source: CCAK & SNV - Study on Biomass Stoves and Fuels in use in Institutions in Kenya (2018)

# Hospitals

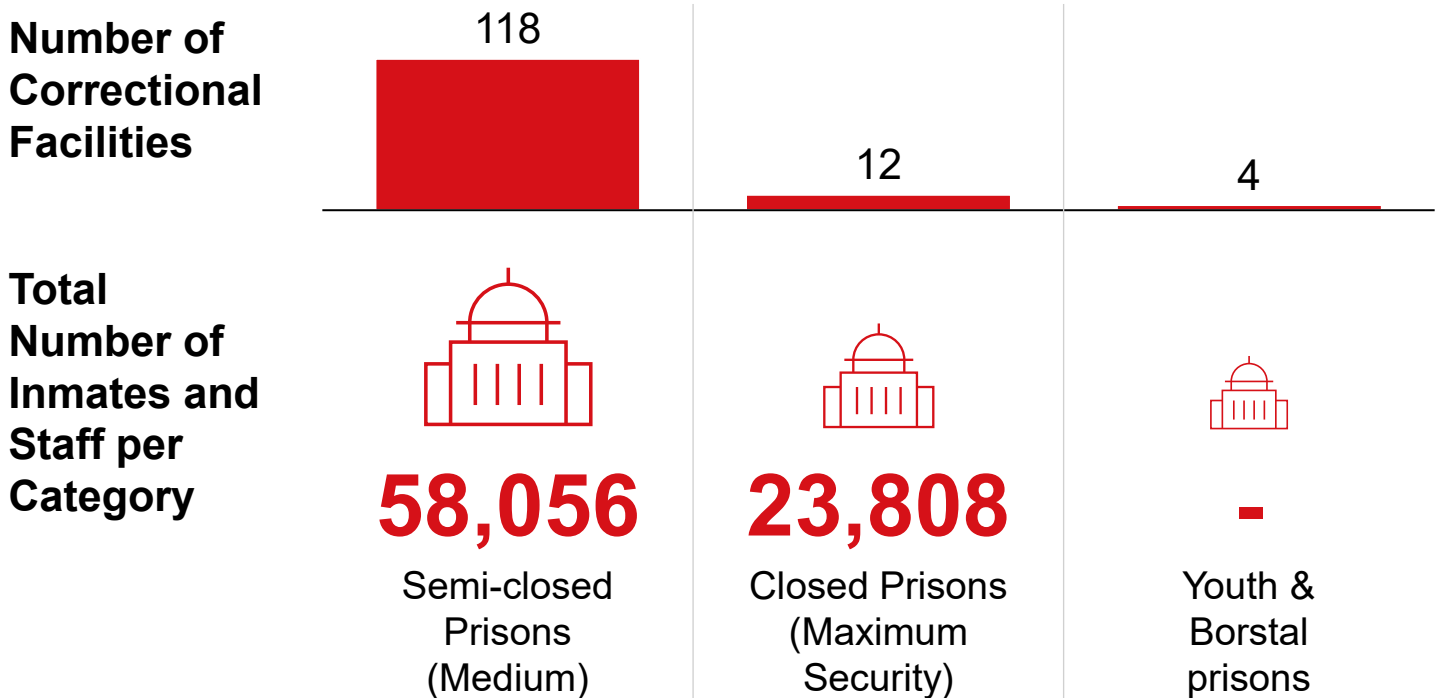
## Number of Level 2-6 Hospitals by KEPH Level



- The chart shows the distribution of health facilities by KEPH level, highlighting concentration of hospital services
- SE4All’s Powering Healthcare study found that ~90% of health facilities use firewood or charcoal for cooking
- Levels 2 facilities dominate in numbers but do not offer in-patient services, i.e., no cooking for patients
- Level 3 and 4 facilities form the largest group of in-patient hospitals, making them central to hospital service delivery at county level.
- Higher-level hospitals Levels 5 (28) and 6 (6) are far fewer in number but represent specialized, referral-based facilities with higher service intensity, therefore high volumes of cooking

Source: MoH, KNBS, AMREF - National Health Census Report 2023; Kenya Prisons Service, SEforAll – Powering Healthcare (2026)

## Correctional Facilities



Across nearly all facilities, prisons prepare multiple meals daily for large resident populations, creating significant and continuous demand for cooking fuel.

Despite this high and predictable demand, only one correctional facility has transitioned to clean cooking technologies so far.

The majority of institutions in Kenya’s correctional system are semi-closed (medium security) prisons, which account for 118 of the 134 facilities. They host the majority of inmates and staff (58,056).

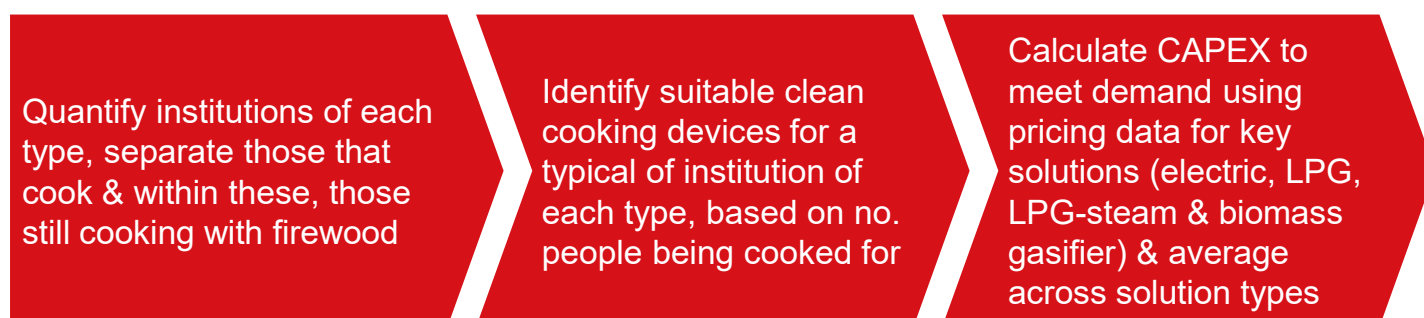
Closed (maximum security) prisons are far fewer (12 facilities), but still house a substantial population (32,808), reflecting the high density of inmates within these institutions.

Youth and borstal institutions are focused on juvenile and young offender rehabilitation. They represent a very small segment, with only 4 facilities and a comparatively small population.

Source: Kenya Prisons Service; Ministry of Interior - State Department for Correctional Services

## Investment needs

The financing needs for the sector vary widely depending on the technologies and business models employed. To estimate the total volume of investment required by the sector as a whole, a structured approach was used to quantify the demand for clean cooking in each market segment and the CAPEX required to meet that demand by:



The analysis found that a total of KES 77b / \$589m would be required to transition over 100,000 institutions serving a total of 12.7m people to clean cooking.



Full details of the methodology and the underlying dataset are available in this open-access resource: <https://tinyurl.com/f45cakjd>

| Institution type | No. institutions | No. institutions to transition to clean cooking | No. ppl to feed     | Investment required                   |
|------------------|------------------|---|---------------------|---------------------------------------|
| Correctional     | 134              | 133   | 81,000              | KES 0.4 billion / \$ 3.2 million      |
| Education        | 97,447           | 66,593  | 12.4 million        | KES 75 billion / \$ 578 million       |
| Health           | 13,477           | 4,204   | 153,000             | KES 1 billion / \$ 7.8 million        |
| <b>Totals</b>    | <b>111,058</b>   | <b>70,930</b>                                   | <b>12.7 million</b> | <b>KES 77 billion / \$589 million</b> |

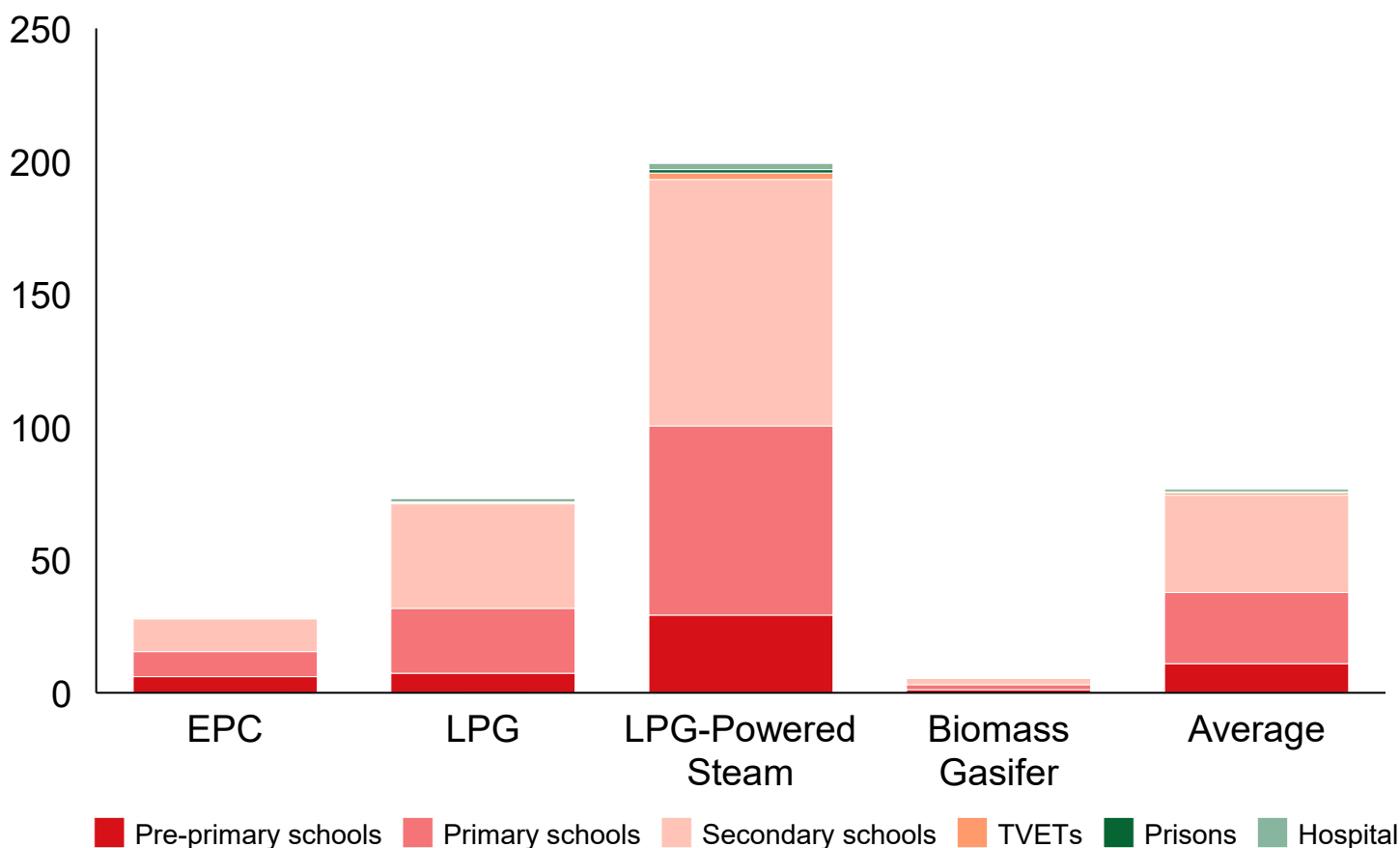
## Financing needs

Breaking down the investment requirements by cooking technology and market segment reveals that:

- The institutional cooking sector is dominated by schools, with health and correctional facilities representing much smaller market segments.
- Of the four solutions modelled, biomass gasifiers offer the lowest CAPEX and LPG-powered steam generators are the highest CAPEX pathway. However, this analysis focused solely upon CAPEX due to data limitations and any major investment decision should also take into account the OPEX for each potential solution.






























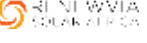











### CAPEX Requirement by Cooking Technology & Market Segment

CAPEX (billion KES)



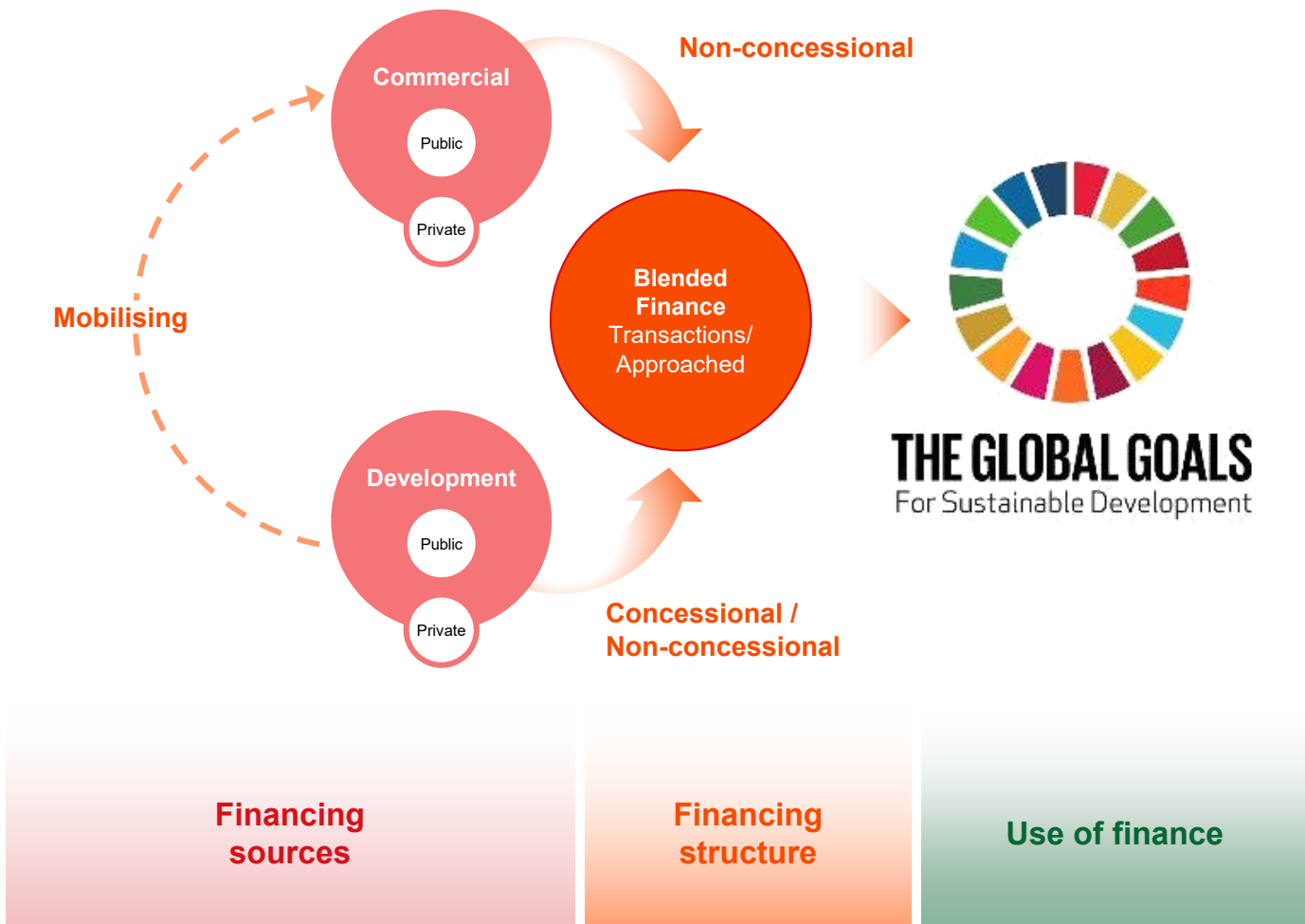
# Solutions available

Across the clean cooking value chain, Kenya offers a vibrant ecosystem, with a diversity of partnership and scale-up opportunities. Institutional clean cooking device manufacturers and portfolio holders featured in this sector pack are highlighted with their logos below.

|    |   |   |   |
|---|--|---|--|
| Manufacturers/<br>Technology Providers  | Financiers   | Infrastructure  | Ambassadors and<br>Enablers  |
| <p><br/>Market leader; manufactures improved biomass stoves, pellet stoves, LPG accessories, and eCooking appliances</p> <p><br/>Prefabricated/flexible biogas systems for domestic/institutional use.</p> <p><br/>Kenya-based clean energy enterprise that manufactures award-winning solar- and grid-powered institutional electric cookstoves tailored for large-scale kitchens</p> <p><br/>A manufacturer of electric pressure cookers for institutional clients.</p> <p><br/>Turnkey solution provider and manufacturer of steam cooking solutions</p> <p><br/>Manufacturer of steam cooking systems</p> <p><br/>Supplier of off-grid and grid-connected electric cooking systems</p> | <p><b>Development/Grant-Focused</b></p> <p><br/>UK-funded; leads eCooking R&amp;D/strategy (KNeCS).</p> <p><br/>RBF for market transformation.</p> <p><br/>RBF deals (e.g., EcoSafi, ACE).</p> <p><br/>Multilateral lenders.</p> <p><b>Commercial/Impact Investors:</b></p> <p><br/>Debt for eCooking expansion (e.g., BURN).</p> <p><br/>Debt financing.</p> <p> <br/>Carbon finance players – high-value credits are a key revenue stream (50%+ of companies involved).</p> <p>  <br/>Local banks – Clean energy loans; potential scaling post-2025 summit.</p> | <p><br/>Grid expansion; targets 500,000+ eCooking users by 2026.</p> <p><b>LPG Infrastructure:</b> Major players include</p> <p>  </p> <p><br/>new terminals (30,000-ton facility)</p> <p><b>Mini-grids:</b></p> <p> </p> <p><br/>(off-grid eCooking/biogas support).</p> <p><br/>Off-grid renewable energy centers.</p> | <p><br/>Sector champion; 104 members, events (e.g., Clean Cooking Week), and policy lobbying.</p> <p><br/>Leads KNCTS/KNeCS; partnerships with IEA, Norway, and the US.</p> <p><br/><b>(Global):</b> Supports CCIU, CCAK &amp; offers market intelligence.</p> <p><b>Influencers:</b></p> <p> <br/>eCooking demos TV reach</p> <p><br/>Aggregates all public schools</p> <p><b>County Governments –</b><br/>Counties being front runners</p> <p>  </p> <p><br/>Responsible for all correctional institutions</p> |

# Showcasing institutional portfolios

Why Institutional Portfolios Matter: Scalable Investment Entry Points



- **Large, aggregated demand** across schools, prisons, health facilities, and TVETs.
- **Clear public counterparties with decision authority** – national agencies (NACONEK, Prisons Dept.) and county governments.
- **County-level aggregation for devolved services** – TVETs and healthcare bundled at scale (e.g. Makueni and Garissa Counties).
- **Portfolio-based investments, not pilots** – standardized delivery models with clear pathways to scale.
- **Blended-finance and carbon-ready opportunities** – combining public budgets, private capital, and results-based/carbon revenues.

# INSTITUTIONAL PORTFOLIO: NACONEK

Government-backed national transition for public schools

## Opportunity Snapshot



**Project Owner: NACONEK & Min of Education**

- Total kitchens to establish:
  - 183 centralized kitchens
  - 18,480 decentralized kitchens
  - 2 phased approach

### Phase 1



**471 kitchens in total including**

- 4 centralized kitchens
- 467 decentralized kitchens

### Phase 2



**18,188 kitchens in total including;**

- 179 centralized kitchens
- 18,013 decentralized kitchens

## Investment Highlights

### Phase 1 Investment Requirements

- USD 55M/KES 7B, comprised of:
  - USD 46.6M/KES 6B CapEx
  - USD 8.4M/KES 1B OpEx

### Phase 2 Investment Requirements

- USD 2B/KES 271B, comprised of:
  - USD 1.7B/KES 216B CapEx
  - USD 300M/KES 55B OpEx → Carbon revenue generated to be used to finance OpEx

### De-risking Factors

- Cabinet-approved program
- Piloted in 6 schools
- Existing fuel budget that can be re-directed
- ESIA, NEMA-DNA & Gold Standard registration in progress.
- Centralised via NACONEK

## Program Architecture



### Business Model & Technology

- Steam-based institutional kitchens with LPG/hybrid energy systems



### Service Delivery

- Centrally implemented, operated and maintained through NACONEK under Ministry of Education



### Cash Flows & Value

- Government-backed service payments and carbon credit revenues from verified emissions reductions



### Project Impact

- Climate: >90% energy efficiency vs. 10–15% for open fire; targeting 18,000+ public schools serving 16+ million learners nationwide
- Health & Safety: 768,000 learners supported in Phase 1; piloted in 6 secondary schools (2023-2025)
- Forests & Environment: Reduces deforestation from firewood demand and supports Kenya's climate commitments
- Systems Transformation: 471 kitchens approved by Cabinet; 500+ schools targeted within 12 months



# INSTITUTIONAL PORTFOLIO: Kenya Prisons Service

Government-led national transition for the prison system



## Opportunity Snapshot



- **Project Owner:** Kenya Prisons Service (KPS)
- **National Footprint:** 135 institutions nationwide
- **Population Served:** 60,000 inmates; 22,000 staff

### Phase 1



#### Investment Ready

- 20 prisons (17% national system)
- 25,000 people served daily
- 25,700 t firewood used annually (baseline)
- 42,500 tCO<sub>2</sub>e annual emissions (baseline)

### Phase 2



#### National Scale Up

- Scale from 20 to 135 prisons
- 200,000+ population served
- 200K+ tCO<sub>2</sub>e avoided annually at full scale

## Investment Highlights

### Phase 1 Investment Requirements

- KES 200M CapEx
- KES 100M sustained annual savings
- 3-year payback; 28% ROI

### Phase 2 Investment Requirements

- KES 750M total system-wide investment
- KES 1.05B annual savings at full scale

### De-risking Factors

- Proven pilot: Naivasha Maximum Prison
- 50% cost reduction demonstrated
- 4,100 tCO<sub>2</sub>e avoided per year (pilot)
- 1-year payback (pilot facility)
- Carbon-credit eligible

## Program Architecture



### Business Model & Technology

- One-time infrastructure upgrade & clean cooking system installation
- Lease-to-own / Energy-as-a-Service model



### Service Delivery

- Centrally implemented and managed by KPS
- Integrated operational, safety & performance oversight



### Cash Flows & Value

- Operational savings from elimination of firewood
- Measurable carbon-credit-eligible emissions reductions



### Project Impact

- Elimination of 25,700 tonnes annual firewood use (Wave1 baseline)
- 42,500 tCO<sub>2</sub>e baseline emissions addressed in Phase 1
- 68,000 trees equivalent emissions avoided (pilot results)
- 200K+ tCO<sub>2</sub>e avoided annually at system-wide scale



# INSTITUTIONAL PORTFOLIO: Government of Makueni County

## Vocational Training Centres

### Opportunity Snapshot

**Project Owner:** Makueni County

County Administration has full responsibility over the institutions' management

#### Size of the Market:

- 63 VTCs across the County
- 4,584 people served daily
- All VTCs cook on-site

#### Current Cooking Practices

- Firewood used by all 63 VTCs as primary cooking fuel
- Supplementary fuels:
  - Charcoal – 14 VTCs
  - LPG – 5 VTCs
  - Electricity – 2 VTCs

#### Fuel Consumption & Costs

- Annual firewood consumption 26,336 tonnes
- Annual fuel expenditure: KES 6,978,000

### Clean Cooking Model



#### Identified Technologies

- Electric Pressure Cookers (EPCs), LPG cooking systems, biogas digesters and improved biomass stoves



#### Implementation Approach

- Lease-to-Own/Energy-as-a-Service business model
- Phased transition to clean cooking



#### Value Creation

- Reduced fuel expenditure
- Improved health outcomes for staff and students
- Potential carbon-credit revenues with county-wide adoption

### Investment Highlights

#### Capital Requirements

- KES 50M initial capital

#### Financial Performance

- Projected ROI: 20-30%
- Fuel cost savings: 30-50% annually
- Payback period: 2-3 years

#### Environmental Impact

- 50-80% reduction in firewood use achieved through efficient technologies
- Carbon values KES 5-10 per tonne of CO<sub>2</sub> avoided



# INSTITUTIONAL PORTFOLIO:

## Government of Makueni County

Health facilities

### Opportunity Snapshot



**Project Owner:** County Government of Makueni

#### Market Size / # of Health Facilities

- 235 healthcare facilities (levels 4-5)
- 98 facilities actively cooking for patients

#### Current Cooking Practices

- 74 facilities use dirty or mixed fuels
- Firewood used in 25 facilities
- Charcoal used in 64 facilities

#### Fuel Consumption & Costs

- Firewood consumption: 55,635 kg per month (25 facilities)
- Monthly fuel expenditure (county-wide): KES 431,900

### Clean Cooking Model



#### Identified Technologies

- LPG cooking systems, electric cooking solutions and biogas systems



#### Implementation Approach

- Phased rollout targeting facilities using dirty or mixed fuels
- Partnerships with county government and development partners



#### Value Creation

- Reduced fuel expenditure
- Improved working conditions for healthcare workers and students

### Investment Highlights

#### Capital Requirements

- KES 100-150M initial capital (phased rollout)

#### Financial Performance

- Projected ROI: 20-30%

#### Environmental Impact

- Reduced firewood and charcoal consumption
- Carbon credits from emissions reductions at KES 5-10 per tonne of CO2 avoided

# MANUFACTURERS: Burn Manufacturing



Global leader in design, manufacturing, and distribution of fuel-efficient clean cookstoves and renewable biomass fuels — with the ECOA Pro delivering 64–72% lower biomass use, 39% faster cooking times, measurable climate impact, and reliable renewable fuel supply to institutions and major industries (including the world's largest tea exporters).



## Overview

BURN dramatically cuts fuel costs, reduces emissions and deforestation, improves health/safety in kitchens, and powers sustainable industrial fuel transitions — delivering cost savings, climate benefits, and alignment with Kenya's national clean cooking ambitions.

## Best in class for fuel savings

|          | 552 Students   | 243 Students   | 552 Students   | 1,200 Students       |
|----------|----------------|----------------|----------------|----------------------|
| Meals    | Rice and Beans | Rice and Beans | Rice and Beans | Rice and Beans       |
| Baseline | 3-Stone Fire   | 3-Stone Fire   | 3-Stone Fire   | 3SF & Improved Stove |
| R.O.I    | 7 months       | 8 months       | 7 months       | 8 months             |

Realized ecosystem relationships; Burn provides Improved cookstoves (ECO PRO), Site pre-visit, product installation & commissioning Briquettes supply. TAMUWA partnership provides bagasse briquettes with Assured supply via ECOA. KCB Bank provides CAPEX (Cookstove) financing to schools and OPEX (Briquette) financing) to institutions for 1 year.

## Fundraising stage

Late-stage growth/expansion

## Type of investment being raise

Carbon Project Finance

## Amount of investment being raised

\$10,000,000

## Key traction achieved

- 64–72% lower biomass use vs. traditional methods, enabling rapid ROI of 7–8 months in institutional deployments
- Proven in schools serving hundreds of students (e.g., Mabanda: 552 students; Gatanga Boarding: 552; Kajiado Township: 1,200), replacing inefficient 3-stone fires and improved stoves
- 39% reduction in cooking time (e.g., time-to-boil for 150L water), with further gains using briquettes
- Cleaner, safer, smoke-free kitchens improving working conditions for cooks
- Market leader supplying renewable biomass fuels across industries, substituting non-renewable wood for multinationals and East Africa's largest tea exporters

# MANUFACTURERS: Ecobora



A Kajiado-based institutional stoves manufacturing company, which designs, manufactures and distributes solar and grid powered institutional cookstoves for Sub-Saharan market

Ecobora's core offering includes institutional solar powered stoves, institutional grid powered stoves, installation and repair and maintenance



## Carbon finance opportunity

All our stoves are digitally metered allowing generation of carbon credits. Through our digital monitoring and verification platform (DMRV), we can monetize the carbon generated from our stoves.

## Facility Size

- **20,000 sqm**, with our factory that has an output of 250 stoves per month
- **67 stoves** deployed in schools
- 13 full time staff – **60% female** and **90% youth**
- 25 part time **staff - 80% female** and **100% youth**
- Aiming to mitigate **50 M tons** of CO2 cumulatively by 2030



## Fundraising stage

Seed Capital

## Type of investment being raise

Equity, debt

## Amount of investment being raised

\$1,000,000

## Partner and Clients

- WFP
- UNILIVER
- USAID
- CLASP
- MECS
- TVET
- SCHOOLS
- HOSPITALS

# MANUFACTURERS: Feion



Women-led, youth-led clean energy company solving Africa's institutional cooking crisis

Designs and builds locally made electric pressure cookers for high-volume kitchens.

The company is pioneering the transition to clean institutional cooking by replacing firewood and LPG with innovative, locally manufactured high-capacity Jiko-Kul electric pressure cookers (EPCs) — delivering up to 70% fuel cost savings, 75% faster cooking, smoke-free kitchens, and sustainable green jobs, with a clear path to scaling to 2,500+ institutions by 2030.



## Overview

Feion Green Ventures cuts fuel costs, creates green jobs, improves health in kitchens, and drives sustainability — delivering cost savings, cleaner environments, and alignment with Kenya's national e-cooking goals for institutions.

## Projected Adoption

| Year      | Institutions Onboarded (Cumulative) |
|-----------|-------------------------------------|
| 2025      | 60                                  |
| 2026      | 600                                 |
| 2027      | 720                                 |
| 2028      | 864                                 |
| 2029–2030 | 1,037+ (on track for 2,500+)        |

## Fundraising stage

Seed Capital

## Type of investment being raise

Equity, debt

## Amount of investment being raised

\$2,000,000

## Key traction achieved

- 8+ institutional kitchens deployed across 5 counties within just 5 months of commercialization
- 5,031 students & staff directly benefiting from cleaner, faster, healthier meals
- 70% reduction in fuel costs + 75% less cooking time
- Eliminates harmful indoor smoke & significantly reduces CO<sub>2</sub>e emissions
- Training technicians and creating sustainable green jobs in the clean energy sector

# MANUFACTURERS: IGNIS Innovations



Ignis Innovation is Kenya's leading institutional clean cooking and utilities infrastructure platform, designing, financing, deploying, and operating modern cooking and energy systems for large public and social institutions. The company serves schools, prisons, hospitals, and faith-based organisations through performance-based models that deliver measurable cost savings, emissions reductions, and safer working conditions in institutional kitchens.



## Overview

Ignis cuts fuel costs, creates cleaner and healthier kitchens, reduces emissions, and drives sustainability — delivering strong alignment with Kenya's national clean cooking strategy and institutional mandates. The company is building the backbone of Africa's clean institutional cooking infrastructure — delivering up to 60% fuel cost savings, 3× faster cooking, 85-90% thermal efficiency, dramatically cleaner kitchens, and strong carbon revenues, with a clear path to deploying 400 steam kitchens in 2026-2027 as the first wave of a national and regional pipeline.

## Projected Adoption

| Year        | Institutions Onboarded (Cumulative)   |
|-------------|---------------------------------------|
| 2026 - 2027 | 400 (first wave)                      |
| 2029 - 2030 | 1,500+ (national & regional pipeline) |

## Fundraising stage

Growth Capital

## Type of investment being raise

Senior debt and concessional capital

## Amount of investment being raised

\$15,000,000

## Key traction achieved

- ~2,000 institutions identified and profiled nationwide
- Typical boarding school spends about KES 6 million per year on firewood
- 60% fuel cost savings with 2-4 year payback when carbon revenues are included
- 85–90% thermal efficiency, 3× faster cooking times
- 83% reduction in PM<sub>2.5</sub> levels in kitchens, significantly reducing respiratory risks
- Strong partnerships with the Ministry of Education, NACUNEK, the prison service, and faith-based networks
- Carbon market integration subsidises up to 40% of hardware costs

# MANUFACTURERS: Faith Engineering



Faith Engineering designs and builds the Meko Friendly Steam Cooking System — a multi-fuel steam cooking solution for high-volume institutional kitchens in schools and prisons. The system supports any fuel (firewood, briquette, LPG and electricity etc.) with efficiency of 80% on wood and 93% on LPG.

It reduces cooking time by 40% to 50%, fuel consumption by 75%, and provides space saving, cool, clean & safe operation plus a hygienic cooking area, dMRV monitoring, and carbon financing.



## Overview

Meko Friendly Steam Cooking System cuts fuel costs, reduces cooking time by 40-50%, creates cooler and more hygienic kitchens, reduces smoke and health risks, and enables carbon financing — solving high fuel costs, fuel scarcity, repair costs, and environmental impact in institutional settings.

## Projected Adoption

| Type of customer       | Willing to purchase         |
|------------------------|-----------------------------|
| Kenyan Schools         | 9,000 schools               |
| Kenyan Prisons Service | 100 correctional facilities |

## Fundraising stage

Growth Capital

## Type of investment being raise

Equity, debt

## Amount of investment being raised

\$15,000,000

## Key traction achieved

1. Strong interest from 9,000 Kenyan schools
2. Pipeline interest from 100 Kenyan correctional facilities
3. Strong interest from 9,000 Tanzanian schools
4. 15 locations in Tanzania prison service
5. 75% reduction in fuel consumption
6. Cooking time reduced by 40% to 50%
7. 80% efficiency on wood, 93% on LPG
8. dMRV monitoring and carbon financing capability

## Policy enablers

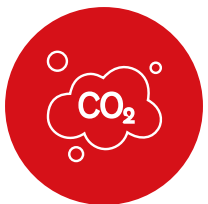
To unlock institutional clean cooking at scale in Kenya, the sector requires four key policy issues to unlock:



**Multi-fuel:** High-level endorsement for multi-fuel institutional cooking transitions by updating the presidential declaration mandating institutions to transition to LPG with a declaration mandating a multi-fuel clean cooking transition.



**Procurement:** Open up public procurement to facilitate emerging innovative business and financing models.



**Carbon markets:** Accelerate access to carbon markets by streamlining LoA issuance and publication of the Article 6 whitelist, enabling inclusion of other renewable fuels/technologies with proven high integrity MRV techniques.



**Tax incentives:** Introduce fiscal incentives to support local manufacturing/assembly of institutional clean cooking devices.

# Kenya offers multiple public SEZs, EPZs and industrial parks

## Example parks<sup>1</sup>



1

**Konza Technopolis**  
Machakos  
**5,000 acres**

Borders 3 counties (Makueni, Machakos and Kajiado)  
60 KM from Nairobi



2

**Dongo Kundu SEZ**  
Mombasa  
**3,000 acres**

Adjacent to the Mombasa Port in Likoni



3

**Naivasha SEZ**  
Naivasha  
**1,000 acres**

Located in Maai Mahiu along the Nairobi-Naivasha SGR line  
Competitive power tariffs  
Planned 5,000 acre expansion



4

**Olkaria SEZ**  
Nakuru  
**8,292 acres**

Leverages geothermal power and hosts KenGen's Green Energy Park



5

**Riwa SEZ**  
Homa Bay  
**530 acres**

13 KM from the CBD  
8 industrial, sector-based zones planned

**18,000 acres of public SEZ and industrial park land**  
**47 CAIPs in development**

1. At different stages of development (e.g., Konza Technopolis is operational, Dongo and Naivasha are under construction)

Source: SEZA, EPZA

# Private SEZs and industrial parks are also available in Kenya

Example parks<sup>1</sup>



1

## Vipingo SEZ

Kilifi  
2,000 acres



Plug-and-play industrial park in Kilifi County focused on green energy solutions



2

## Two Rivers Financial Center

Nairobi  
64 acres



Access to international markets for global, regional, and Kenyan service-oriented business enterprises



3

## Tatu City

Kiambu  
5,000 acres



Mixed-use special economic zone



4

## Northlands SEZ

Kiambu  
528 acres



Private SEZ located in Ruiru, Kiambu County



5

## Infinity IP

Nairobi  
200 acres



Private IP for SMEs located 10 km from Jomo Kenyatta International Airport and 20 km from Nairobi's City Center



6

## Mount Kipipiri Golf and Resort

Nyandarua  
1.478 acres



Megaproject in Kipipiri, Nyandarua

Source: SEZA, EPZA


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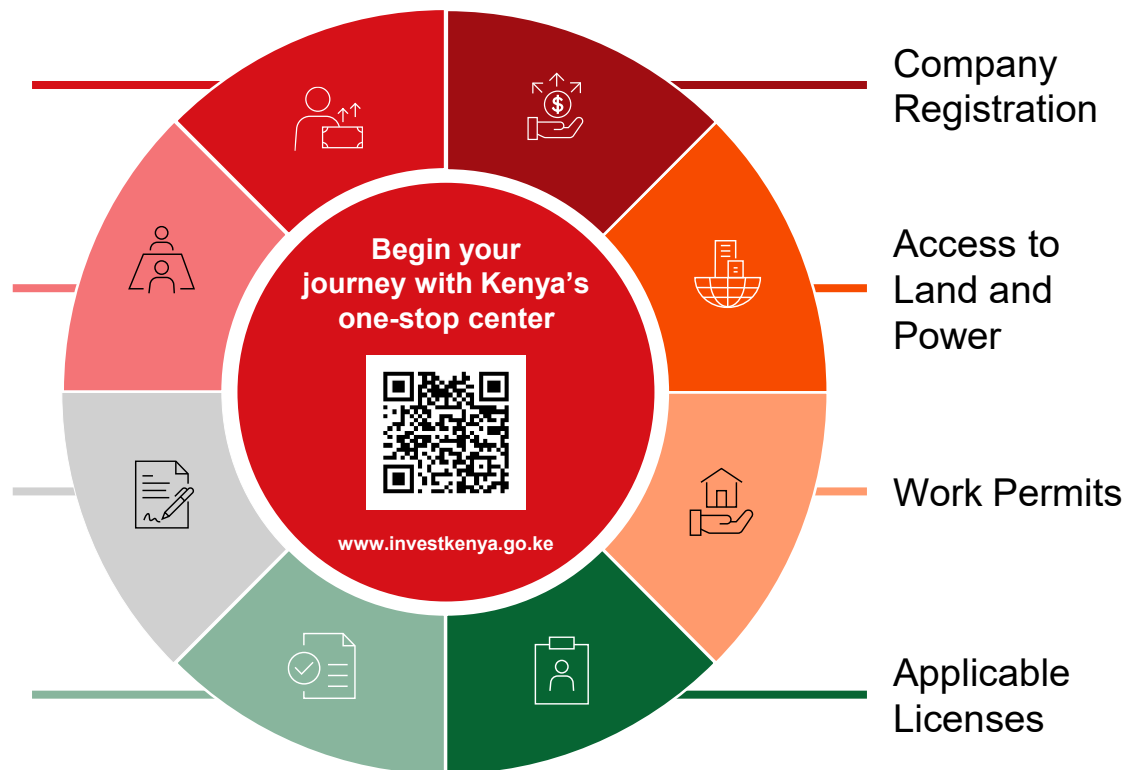
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