Enhancing Subnational Planning for Accelerating the E-Cooking Transition

Appendix 2. Ghana Case Study

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Ghana Case Study

1. Country Context

1.1 Administrative, Geographic and Socio-Economic context

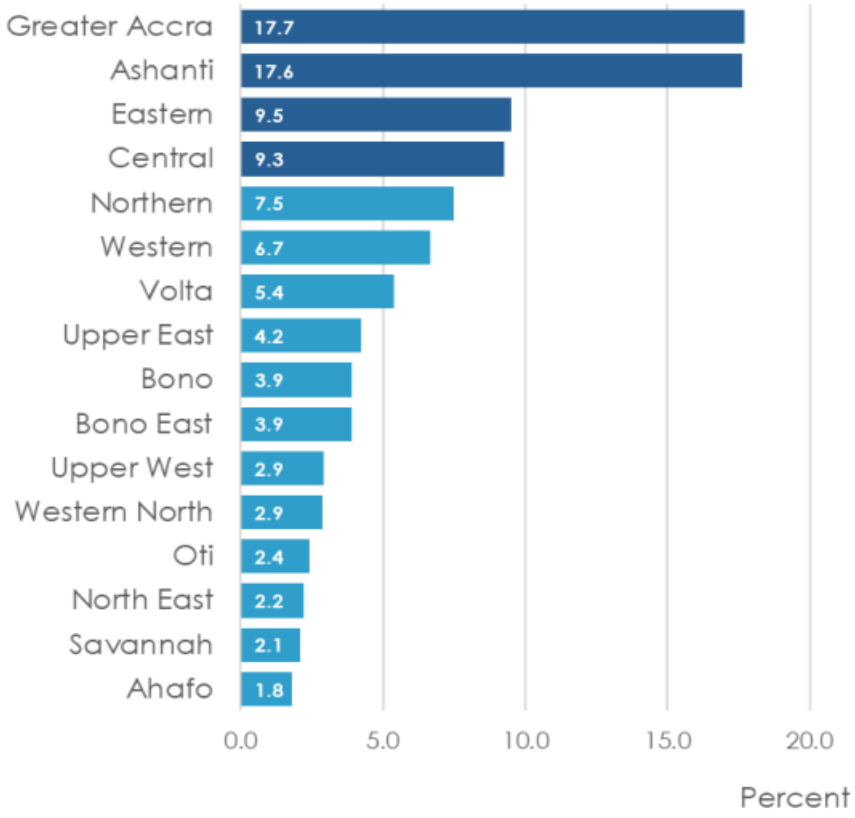
Ghana is one of the largest economies in the West Africa with a nominal GDP of $83 billion, the eighth largest in Africa, and a GDP per capita of $2,406. The population is 34.5 million spread over 238,539 km^2, resulting in a density of ~145 people/km^2. Roughly 58% live in urban areas and 42% in rural areas. Ghana's geography includes coastal plains, tropical forests, the Volta River basin, and semi-arid savannah in the north. The coastal, urban areas have higher levels of grid access, while rural savannah regions rely more on biomass.

Figure 1: Administrative regions and districts (StatsGhana, 2021)



Ghana is a constitutional republic with a unicameral parliament and a decentralized system of governance. As shown in Figure 1, the country is organised into 16 regions subdivided into 261 districts consisting of 13 metropolitan, 124 municipal, and 124 ordinary districts (GhanaDistricts, 2025). Both regions and districts are mandated under the 1994 National Development Planning (System) Act and the 2016 Local Governance Act to prepare local development plans. These are broad development plans, including the promotion of local economic development, basic education and public health, environmental protection and sanitation, and the improvement and management of human settlements. They are responsible for infrastructure, energy access, and community development, making them central to initiatives like expanding electricity access and promoting e-cooking adoption.

Figure 2: Population by region (StatsGhana, 2021)



The Ashanti and Greater Accra regions are Ghana's largest and most populated, each with around 5.5 million people. Greater Accra is the wealthiest and fastest-growing region thanks to its role as the country's political and economic hub (StatsGhana, 2021). Greater Accra accounts for more than one-third of Ghana's GDP, far above any other region, and much of Ghana's services, finance, trade and formal employment are concentrated there. As

consequence, per capita GDP in Accra is several times the national average (UNECA, 2021). The Western Region is also economically significant due to oil and gas, and Tamale in the Northern region is among the fastest-growing urban centres. Ghana's major cities include Accra, Kumasi, Tamale, Takoradi, Tema, Cape Coast, and Sekondi-Takoradi, which serve as key political, commercial, and cultural hubs (City Population, 2021). On the other hand, regions in the north of the country, including Northern, Savannah, Oti, North East, Upper East, Upper West, have the highest Multidimensional Poverty Index (MPI)[1] values ranging from 37% to almost 50% compared to about 12% for Greater Accra (Multidimensional Poverty Report, 2024).

1.2 Energy context

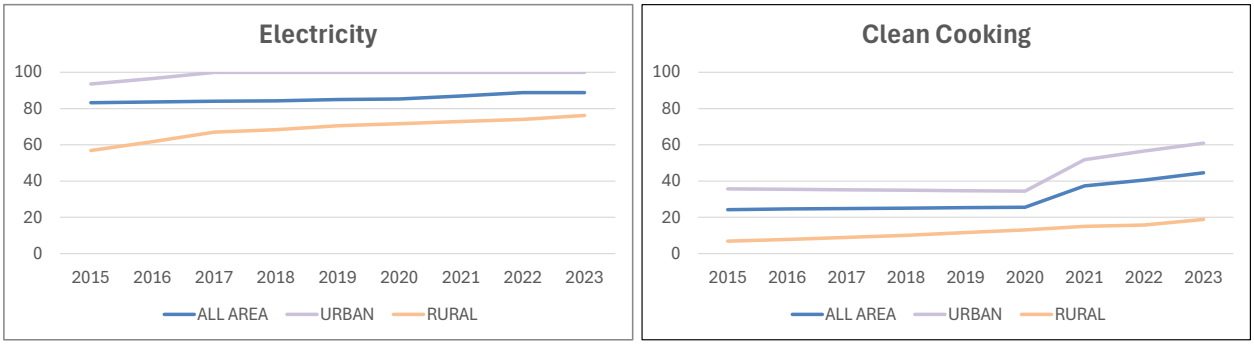
Ghana's electricity sector is characterised by a balanced generation mix between thermal and hydroelectric sources (Tracking SDG 7, 2025)**.** The nation's installed capacity was around 5.3 GW in November 2024 (International Trade Administration, 2024). Electricity generation for 2023 totalled 24.3 TWh and was primarily composed of natural gas, which accounts for the largest share at about 59%, and hydropower, contributing approximately 38%. The remaining portion (about 3%) is covered by oil and solar PV (IEA, 2023). Hydropower is anchored by the Akosombo Dam, one of the largest in West Africa at 1,020 MW, while thermal generation increasingly relies on domestic natural gas (more than 80% of the national supply). Ghana leverages its surplus capacity to act as a net exporter of power to neighbouring countries, Togo, Benin, and Burkina Faso, generating regional revenue.

Ghana's total energy supply (TES) is characterized by a reliance on both fossil fuels and traditional biomass. As of 2023, oil and oil products contribute the largest share at approximately 37.1%, followed closely by biofuels and waste at 31.9%, and natural gas at 24.7% (IEA, 2023). The country is also an oil and gas producer and produced around 4,450 TJ or about 95,000 metric tons of liquified petroleum gas (LPG) domestically in 2023, mainly from condensates. Most of its crude is exported while it remains heavily reliant on imports of LPG and other oil products amounting to more than 10,000 TJ or 210,000 metric tons to meet a growing domestic demand. However, new refinery capacity is coming online as the Jomoro petroleum project began operation in 2024, and with additional phases planned, there is strong potential to increase domestically produced LPG (NPA, 2024).

[1] MPI captures the share of multiple, simultaneous deprivations that poor people experience. MPI ranges from zero to one, and a higher number signifies greater multidimensional poverty.

Access to electricity and clean cooking

Figure 3: Electricity and clean cooking access rates (Energy Commission, 2024)



Ghana's electricity rate is among the highest in West Africa, reaching ~89% nationally (Energy Commission, 2024). However, regional inequalities persist between the highly connected south and the underserved north and island communities, with near to universal access in the urban areas compared to 76% in rural areas. Greater Accra, the most populous region, has the highest electricity access rate at over 99% (see Figure 4). Other highly populated regions (Ashanti followed by Eastern, Central, Western, Volta and Bono) also have a high access rate, ranging from 90 to 95%. By contrast, the less populated regions of Ahafo, Savannah, Oti, Upper East, and North East have access rates ranging from 60% to 75%. Even in the Northern region with growing urban centres like Tamale, the third most populous city in the country, electricity access is around 82%.

Figure 4: Electrification rate by region (Energy Commission, 2024)



Regional variations notwithstanding, overall access rates are high for sub-Saharan Africa. Efforts to achieve this level of access began in the late 1980s when only 15% of the population were electrified. The 1989 National Electrification Scheme (NES) aimed to electrify all communities with over 500 residents by 2020. By 2005, access exceeded 50%, and as of 2023, it is around 90%—the highest in sub-Saharan Africa (excluding small states). The NES was successful partly because it was complemented by the Self-Help Electrification Programme (SHEP), which sought to accelerate access by requiring community resources and support. Under SHEP, which began in 1990 and has continued under multiple phases, communities within 20 km of an 11 kV or 33 kV network were electrified if they purchased and installed all required low-voltage poles and wired at least 30% of households (Copenhagen Consensus, 2020). The programme successfully accelerated rural electrification through community co-financing with participation from both households and local governments (Kemausuor and Ackom, 2017), resulting in

reduced public costs and bringing benefits to households and the health, education, water supply and commercial sectors. On the other hand, the SHEP resulted in inequalities in access as it focused on communities already within reach of the grid and with the financial resources to co-finance distribution infrastructure and household wiring with poorer and more remote communities unable or ineligible to participate. These areas are now targeted with mini-grids and stand-alone systems to achieve universal access by 2030 as highlighted by the 2025 launch of the Scaling-Up Renewable Energy Programme (SREP). Recent government communication about SREP calls for community ownership and participation in the construction and management of the off-grid systems (Ministry of Energy, 2025). Ghana's success in the electricity sector thus far reflects sustained efforts over three decades, including regular strategy reviews, the use of analytical tools such as geographic information systems, affordability measures but also a relevant cooperation with local communities as demonstrated by the SHEP, which mobilised local actors to co-finance and deliver connections, lifting access dramatically (IEA 2022).

For clean cooking, the official SDG 7 data indicates access rates at around 33% in 2023 (Tracking SDG 7, 2023) while Ghana's Energy Commission (EC) suggests a higher level, nearing 48% in 2024 (Energy Commission, 2025). Table 1 shows primary cooking fuel as displayed by EC from 2021-2024. While the 2021 statistics use reliable figures from the 2021 Population and Housing Census showing ~37% clean cooking access, the source of the more recent numbers is unclear and could be projections. Despite high electricity access rates, the proportion of households using electricity as the main source of cooking remains below 1%. The predominant clean cooking fuel is LPG with a share of around 48% in 2024 up from 24% in 2015 and 18% in 2010. However, solid fuels such as wood and charcoal still make up a majority of cooking fuel use.

Table 1: Primary cooking source (Energy Commission, 2025)

Year	LPG			Electricity			Wood/Charcoal
	National	Urban	Rural	National	Urban	Rural	National
2021	36.9%	51.3%	14.8%	0.4%	0.5%	0.2%	31.1% / 23.2%[2]
2022	40.2%	56.1%	16.5%	0.4%	0.5%	0.2%	
2023	44.1%	60.3%	18.7%	0.5%	0.6%	0.2%	
2024	47.9%	64.4%	20.5%	0.5%	0.6%	0.2%	

[2] The Energy Commission does not present statistics on cooking with wood or charcoal, so the numbers here are from the 2021 Housing and Population Census. As noted, the Energy Commission also uses the census for its 2021 LPG and electricity statistics.

From a subnational perspective, the census offers some insight through data disaggregated by region, with cooking fuel trends that are largely predictable given that the population becomes more rural and poor moving north. LPG is mainly used in urban areas, especially in Greater Accra (62.8%), while in the Savannah and North East has the lowest penetration (4.3% and 4.2%, respectively). Firewood use is most widespread in North East (83.1%) and used least by households in Greater Accra (2.1%). On the other hand, charcoal is relatively common in urban areas, used by 20.6% of the population in Greater Accra. However, its use is actually higher in the surrounding regions of Volta (28.7%), Central (28.6%), Ashanti (27.3%), Bono East (26.9%), and Eastern (26.5%) where presumably LPG has not displaced it as much as in the capital city where there is more wealth. And as expected, charcoal use is lowest in the areas of northern Ghana where firewood dominates, with lowest use in the North East region (10%).

Electric cooking opportunities and challenges

Energy Prices and Affordability

As reflected in the statistics above, the government has been actively supporting and prioritising the use of LPG for cooking (e.g. 2013 Rural LPG Promotion (RLP) program, the recent Cylinder Recirculation Model (CRM) and the 2022 National LPG Promotion Programme) resulting in an increase in adoption as a primary cooking fuel from 18% in 2010 to 37% in 2021 (51% in urban areas, 15% rural areas, Census, 2021). The program has a target of reaching 50% penetration by 2030 (Ministry of Energy, 2025). Despite Ghana's oil and gas production, 70% of LPG is currently imported, exposing customers to foreign exchange risk and global price volatility.

Ghana's electricity tariff regime is considered well-performing and balanced across Africa. Its tariffs sit in between high-cost countries like the Central African Republic and Chad and heavily subsidized or hydropower-heavy countries such as Egypt, Algeria, Morocco, Ethiopia, and Uganda (PURC, 2025). After a period of stability until around 2022, rates have been increasing due to various factors, including reduction of cross-subsidies, exchange rates, and inflation (Energy Commission, 2024).

Table 2: January 2026, Residential tariffs for electricity (PURC, 2026)

Tariff Block	Price (GHS)	Price (¢)
0-30 kWh (Lifeline Customers)	88	8.3
0-300 kWh (All Other Customers)	200	19
Above 300 kWh (All Other Customers)	265	25
Service Charge (Lifeline Customers)	213	20
Service Charge (All Other Customers)	1073	101

A study by Institute of Statistical, Social and Economic Research (ISSER), under the Modern Energy Cooking Services (MECS) project, estimated the cost of cooking with electricity, LPG and charcoal for common Ghanaian meals. The experiments showed that cooking with EPCs costs significantly less per meal, about 65-60% less than LPG and about 55-75% less for charcoal depending on the meal (MECS, 2023). Prior studies have also concluded that the common belief that electric cooking is expensive is incorrect, at least under controlled cooking conditions, and called for policies to promote e-cooking (e.g. making e-cook appliances more affordable, ensuring reliable electricity supply) as well as for the government to raise awareness more broadly across the country to encourage households to adopt the electricity for cooking (MECS Study, 2021).

In summary, while LPG and biomass continue to dominate the cooking landscape, electricity, when available and combined with the right appliances, offers a cheaper, cleaner and more sustainable alternative. Continued support to LPG can be combined with stronger support to electric cooking adoption, leveraging high electricity access rates and plans to expand the grid and electricity generation capacity.

Electricity Networks, Reliability & Coverage

Ghana's national transmission network is managed by the Ghana Grid Company (GRIDCo), which operates roughly 7,200 km of high-voltage transmission lines as part of the National Interconnected Transmission System (NITS). Under-recoveries due to inefficiencies in sector governance hinder GRIDCo's ability to finance critical transmission infrastructure upgrades, leading to bottlenecks, network capacity limitations, and reduced system reliability (ACEP, 2023). However, several recent interventions have also led to improvements, including the use of GIS, management software that collects data digitally, an outage management system, and automation and control on MV lines, resulting in a 15-fold reduction in the average outage duration in Accra.

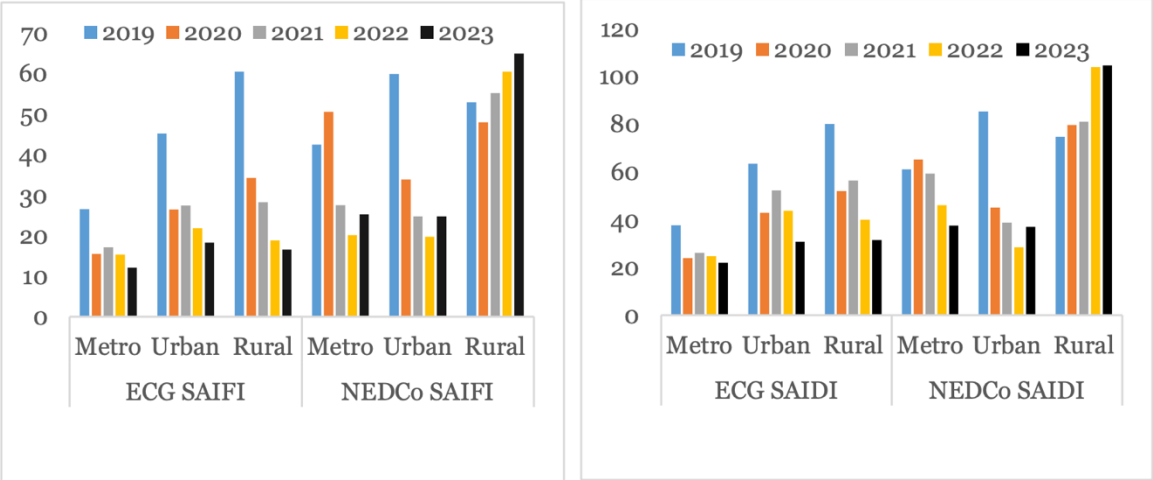
Electricity distribution is mainly divided between two main utilities, both owned by the government: Electricity Company of Ghana (ECG) serving most of southern Ghana (Greater Accra, Ashanti, Central, Eastern, Volta, Western, etc.) and Northern Electricity Distribution Company (NEDCo) serving the northern half of the country (Northern, Upper East/West, Savannah, Bono/Bono-East/Ahafo, parts of Volta & Ashanti). There is a third operator, Enclave Power Company Ltd (EPC), the only privately-owned electricity distribution company, operating in the Tema Free Zones Enclave in the Greater Accra.

According to Afrobarometer household surveys from 2022, grid electricity reliability is one of the highest on the continent with about 78% of grid-connected households reporting having electricity most or all of the time. Across all respondents, including those without a grid

connection, 78% in urban areas and 56% in rural areas reported having electricity most or all of the time (Afrobarometer, 2024).

The most recent official reliability indices from 2023 show that both ECG and NEDCo continue to underperform against regulatory benchmarks for interruption frequency (SAIFI). The number of interruptions per customer per year range from 12 to 18 for ECG and from 25 to 65 for NEDCo, although there has been some improvement over the past few years aside from NEDCo in rural areas. For outage duration (SAIDI), the number of hours per customer has also generally decreased in recent years under ECG and NEDCo, again with the exception of NEDCo in rural areas where in some cases SAIDI increased to 100 hours from around 80 previously.

Figure 5: Reliability data trends 2018-2023 (Energy Commission, 2024)



At HV level, through GRIDCo's 2025–2030 Transmission Tariff Proposal, the government plans to reinforce transmission capacity, upgrade substations, and expand high-voltage lines to support growing demand and stabilize supply. Interventions will range from increased redundancy in key load centres to the closing of loops such as the Eastern Corridor Transmission Project. This latter project seeks to improve reliability, increase transfer capacity, and improve voltages for NEDCo as well as ECG Customers in the Volta region. Other initiatives include the installation of equipment to improve power system quality of supply in the northern regions (GridCo, 2025).

The recent improvement of voltage quality and relative reliability in urban/metro zones (especially the southern and central regions under ECG) makes e-cooking scale-up more realistic. In rural and northern regions under NEDCo, however, more frequent and longer outages, plus lower quality voltage in some locations, pose serious barriers in the short term

for reliable electric cooking. Looking forward, the planned interventions to expand and reinforce the grid suggest that, over the next 5-10 years, many currently underserved areas may gain access to electricity of sufficient quality to potentially enable electric cooking.

2. Policy and planning environment

2.1 Institutional Ecosystem

In Ghana, the energy sector is centrally managed under the Ministry of Energy and Green Transition, the principal body responsible for the overall energy sector, including policy, planning, and coordination of electricity and clean cooking initiatives.

The Energy Commission serves as the technical regulator for the development and utilisation of energy resources and licenses providers of electricity and natural gas. It has a mandate for supporting the development of national clean cooking policies, regulating and certifying clean cookstoves, promoting LPG and other clean fuels, coordinating national clean cooking programs, generating national energy and cooking-fuel statistics, and leading Ghana's long-term energy transition framework.

The National Development Planning Commission (NDPC) advises the President (and the Parliament on request) on development of policy and strategy, prepares national development plans, and coordinates, monitors and evaluates their implementation across national and local levels. The NDPC coordinates and publishes Medium-Term Development Plans (MTDPs), strategic roadmaps that are developed at the district, region, and sector levels following a consultive process involving all relevant national and local actors. Following its broader mandate, NDPC's role is also to integrate clean cooking goals into national development policies and strategies, ensuring coordinated implementation and monitoring across ministries and agencies.

The Public Utilities Regulatory Commission (PURC) is the multi-sector regulator that oversees utility service provision, including tariff setting, performance standards and consumer protection for the electricity sector. It indirectly influences the clean cooking transition by regulating electricity pricing and setting quality of supply targets (SAIDI/SAIFI), thereby impacting the affordability and reliability of electricity for cooking.

The government also owns about half of installed generation capacity, the transmission system operator that manages the interconnected transmission system, as well as the two major power distribution companies. Below is a list of the key state-owned entities:

- Volta River Authority (VRA) is the largest electricity generation utility, responsible for producing bulk power using hydroelectric, thermal and renewable sources to supply

the national grid. It owns and operates major power stations, including Akosombo and Kpong and sells electricity in bulk to distribution companies and industries, covering around 45% of the national installed capacity.

- Bui Power Authority (BPA) is another state-owned generation company, responsible for managing the Bui Hydro Power Plant, which contributes about 10% to national installed capacity.
- Ghana Grid Company Limited (GRIDCo) is the national transmission company, transporting electricity from generators to bulk consumers via the National Interconnected Transmission System.
- The two main distribution companies are state-owned utilities, the Electricity Company of Ghana (ECG) serving most of southern Ghana and the Northern Electricity Distribution Company (NEDCo) covering northern Ghana (including Northern, Upper East, Upper West, Bono, Bono East and other regions) as a subsidiary of VRA.

In addition to the state-owned players, around half of the generation capacity is owned by independent power producers. Moreover, Enclave Power Company Ltd (EPC) is the only private distribution company operating within the Tema Free Zones Enclave and the Dawa Industrial Zone. It purchases bulk power (about 45 MW) from the Volta River Authority and distributes it to industrial customers.

In clean cooking sector, the National Petroleum Authority (NPA) plays a regulatory and promotional role in the LPG sector under national programmes like the National LPG Promotion Programme, aligning with the Ministry of Energy to expand access to clean cooking fuels.

Ghana's decentralized governance system, as stated in the Local Governance Act, 2016, places the Metropolitan, Municipal and District Assemblies (MMDAs), at the core of sub-national administration, serving as the primary local planning authorities responsible for development coordination, environmental management, and implementation of national programs. The 261 MMDAs currently consist of 13 metropolitan assemblies, 124 municipal assemblies and 124 district assemblies. Metropolitan assemblies are mainly urban areas with a minimum population of 250.000; municipal assemblies are single-town jurisdictions with a minimum population of 95.000; and district assemblies constitute a combination of rural areas and small towns with a minimum population of 75,000 (OECD/UCLG, 2022).

Within the MMDAs, several sub-committees are established, each one dedicated to specific sectors (e.g., development planning, social services, justice and security, finance and administration) to assist the district assembly in deliberative, legislative and executive functions.

The Regional Coordinating Councils (RCCs), the highest administrative and political body in each of the 16 regions of Ghana, play an intermediate role between the MMDAs and the central government, ensuring coordination and coherence among the MMDAs belonging to the same region. The RCCs are headed by a regional minister and one or more deputies appointed by the president. Membership of RCCs include the presiding member and chief executive of each MMDA, two traditional leaders from the regional House of Chiefs, and regional heads of decentralized ministries in the region as members without voting rights (OECD/UCLG, 2022).

Beyond local and national institutions, also non-state actors, including Civil Society Organisations (CSOs), Development Partners (like UNDP and GIZ who often provide technical and financial support), the Private Sector, and public stakeholders (citizens, community groups, and traditional authorities), are active in the clean cooking space. In practice, MMDAs, for example, collaborate with NGOs and private sector partners to organize local clean cooking education, demonstrations, training for artisans in improved stove production and cookstove distribution efforts, especially in rural and peri-urban communities.

The Ghana Alliance for Clean Cookstoves & Fuels (GHACCO) for example plays a coordinating role across civil society, private sector, and government, promoting clean cooking, efficient cookstoves, and clean fuels (GHACCO 2024). Through GHACCO, there have been for example several awareness-creation efforts targeting women as the "improved Cooking Solutions Advocates" (GHACCO, 2021) or the "Obaatan Boafo" ("Mother's Helper") (GHACCO, 2016).

2.2 National Energy Planning Related to E-Cooking

Below are a few key policies that are relevant to the clean cooking sector.

Table 3: Policies and strategies relevant to e-cooking

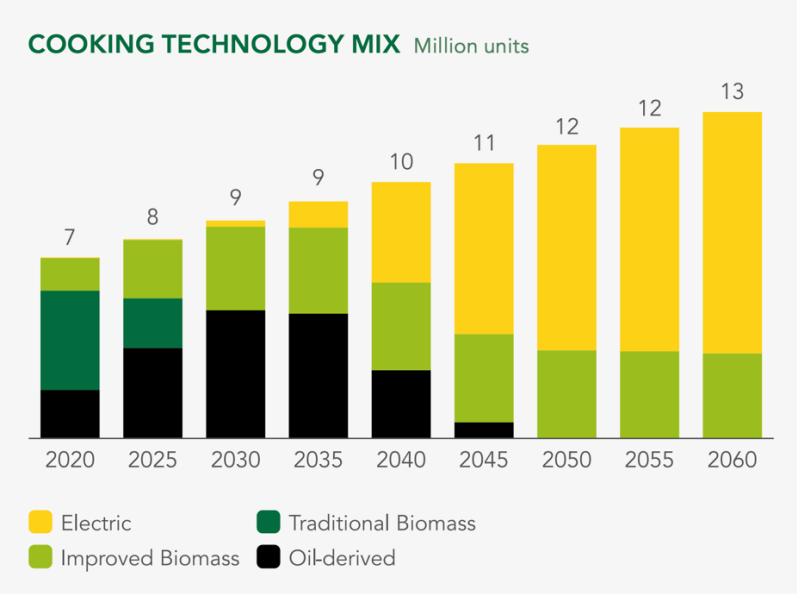
Key Policies	Description
National Energy Policy (2021)	Overarching national energy framework setting direction for energy access, clean cooking, efficiency, and modern technologies (supports clean cooking, including LPG, and opens space for modern technologies like electric cooking).
National LPG Promotion Programme (2022)	Government programme issued in 2022 to increase clean cooking access by promoting LPG uptake (targeting 50% access by 2030) and distribution of LPG stoves.
Biennial Transparency Report to UNFCCC (2024)	Mandatory report under the Paris Agreement that has set new targets to increase adoption of LPG and improved cookstoves.
Energy Transition and Investment Plan (ETIP) (2024)	Comprehensive plan for achieving net zero by 2060 including modern cooking, low-carbon technologies, electrification and investment pathways.
M300 National Energy Compact (2025)	Aims to increase access to clean cooking solutions from 36.9% to 50% by 2030, primarily by scaling up LPG adoption and rolling out five million modern biomass, LPG, and electric cookstoves.
National Clean Cooking Policy, Strategy, and Investment Prospectus (Under Development)	Government is developing a National Clean Cooking Policy, Strategy, and Investment Prospectus as the key overarching framework to coordinate all clean cooking interventions across the country.

The 2021 National Energy Policy aims to accelerate the achievement of universal electricity access and promote the adoption of clean cooking fuels, primarily LPG. While universal electricity access is targeted for 2024, there are no new targets for clean cooking aside from the 2017 National LPG Promotion Policy that set a target for 50% adoption of LPG by 2030. The Energy Sector Recovery Program approved in 2024 and funded by the World Bank will support the National LPG Promotion Programme by subsidizing stoves for 450,000 households and 7000 commercial enterprises (World Bank, 2024).

The 2024 Energy Transition and Investment Plan (ETIP) sets an ambitious target of achieving net-zero energy-related carbon emissions by 2060 through universal access to LPG,

improved cookstoves, or e-cooking by 2030. According to this scenario, traditional biomass is phased out by 2030 in line with SDG 7, largely by expanded use of LPG and improved biomass cookstoves. Electric cooking begins to emerge around 2030 with a parallel decrease in LPG until its phaseout in 2050 when electric cooking and improved biomass dominate, largely in urban and rural households, respectively.

Figure 6: ETIP cooking technology targets



The mandatory 2024 Biennial Transparency Report to UNFCCC, recalling Ghana's NDC commitments, identifies clean cooking as a mitigation priority to address the public health and environmental impacts of the continued reliance of about 87% of households on solid fuels. It reports targets to scale up the adoption of improved biomass cookstoves to 3 million households and to increase LPG use in peri-urban and rural areas from about 5.5% to 50% by 2030, framing these actions as part of Ghana's climate and energy transition strategy.

Most importantly, the Ministry of Energy and Green Transition announced in March 2025 the preparation of a National Clean Cooking Policy, Strategy, and Investment Prospectus, which will outline a structured framework focusing on the adoption of a diversified clean cooking energy mix. The subsequent M300 National Energy Compact formalized this commitment in September 2025 and reiterates that a clean cooking policy, strategy, and investment prospectus will be published by 2026. It also commits to the integration of e-cooking in electricity planning as a demand stimulation measure and, by 2030, a target of 50% adoption of LPG and the deployment of three million improved biomass cookstoves.

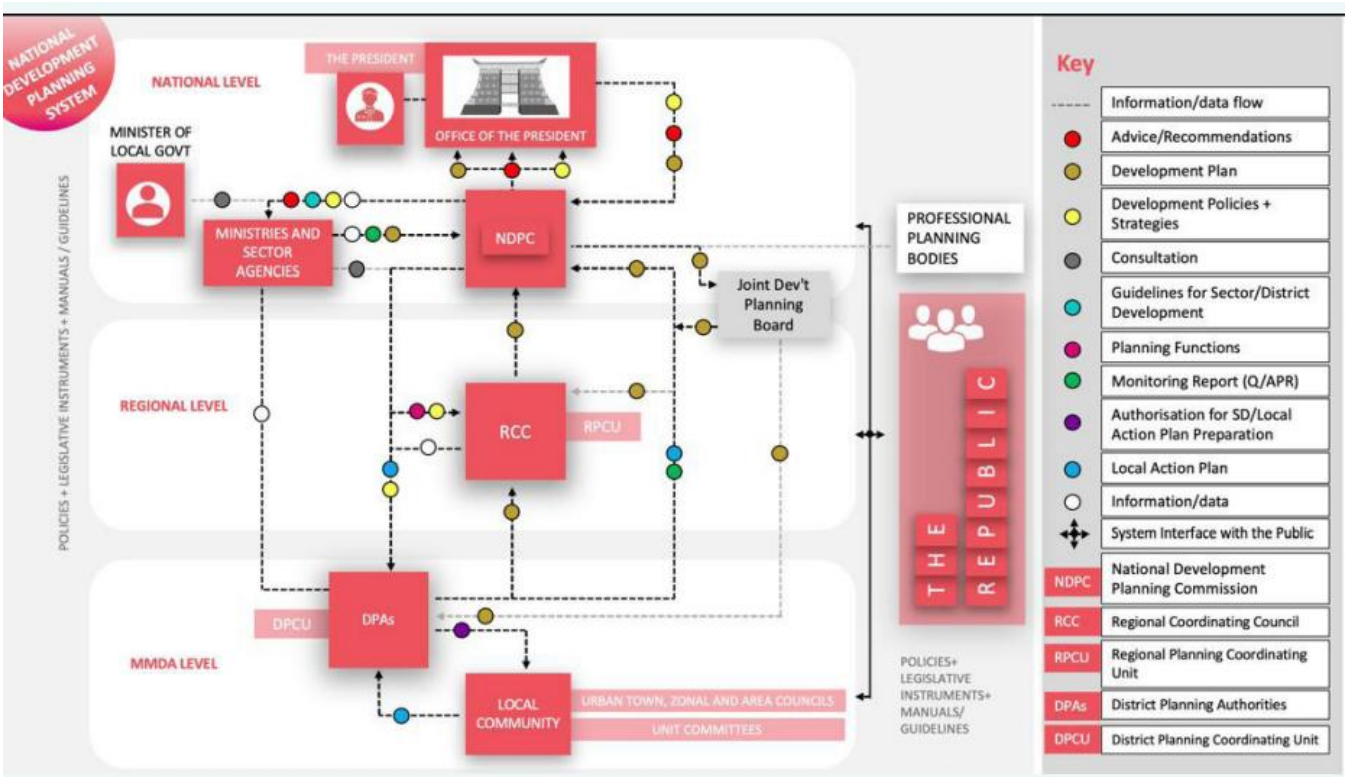
In December 2025, in collaboration with the Governments of Ghana and Switzerland, the World Bank has issued a $200 million Clean Cooking Outcome Bond to mobilize about $30

million in private capital for UpEnergy to deploy over 400,000 cleaner cookstoves in Ghana. The bond is linked to a fixed rate lower than a typical World Bank rate and a variable rate linked to the generation of Internationally Transferred Mitigation Outcomes (ITMOs) with KliK Foundation as the offtaker. Investors forego a portion of the coupon payments to allow upfront financing (enabled by a hedge transaction with Standard Chartered) for UpEnergy to subsidise the cost of the appliance. The bond aims to provide cleaner cooking access to 1.3 million people in Ghana (World Bank, 2025).

2.3 Decentralization and Subnational Energy Planning Related to E-Cooking

As described previously, Ghana's development planning operates within a decentralized framework that links national, regional, and district levels. The national–regional–district planning structure is explicitly designed to be a hybrid top-down and bottom-up, meaning that national policy directives inform local plans while local development needs and inputs inform higher-level plans, according to the NDPC guidelines for the preparation of the Medium-Term Development Plans (NDPC, 2024). Figure 7: from the guidelines illustrates this interlinked system, with NDPC and sector ministries at the national level, RCCs at the regional level, and MMDAs at the district level working in tandem.

Figure 7: National development planning system (NDPC, 2024)



Institutional responsibilities at each level are defined by law and coordinated through planning units.

At the national level, NDPC formulates the National Medium-Term Development Policy Framework (aligned with the President's Coordinated Programme) and issues planning guidelines to all sectors and districts. Ministries, departments, and agencies (MDAs) prepare sector plans and programs aligned to the national framework and provide input or support to local development initiatives. NDPC reviews and harmonizes these plans to ensure they fit the national development agenda.

At the regional level, RCCs, via their Regional Planning Coordinating Units (RPCUs), coordinate and harmonize the plans of districts within each region. RCCs do not implement projects directly; rather, they ensure consistency of district plans with national priorities and facilitate inter-district projects. They are now tasked with preparing Regional Integrated Plans (RIPs) that synthesize development priorities across the region (as per L.I. 2232) (NDPC, 2024). RCCs also monitor and evaluate the implementation of district plans in their region.

At the district level, the MMDAs are the basic units of local government and the primary entities for local development plan preparation and execution. Under the Local Governance Act, MMDAs must mobilize resources to prepare, implement, and monitor participatory local MTDPs and corresponding annual action plans. MTDPs are detailed roadmaps designed by each MMDA in accordance with the NDPC guidelines that outline the strategic direction, policy objectives, and specific interventions required to achieve desired socio-economic outcomes within a four-year cycle. MTDP preparation is led by a District Planning Coordinating Unit (DPCU) composed of heads of departments and technocrats and must involve broad stakeholder participation, including community input and consultations, to reflect local needs. The law emphasizes active participation of the citizenry in the planning process, underscoring Ghana's commitment to bottom-up development.

Once a district MTDP is drafted, it is submitted through the RCC to NDPC for review, approval, and certification before implementation. NDPC certification ensures the plan is consistent with national development policy and standards. After approval, the district assembly is responsible for implementing projects, monitoring progress, and reporting back up to the RCC and NDPC on outcomes and into national monitoring and evaluation systems. Within the MMDA, urban/town councils and unit committees support household-level outreach and monitoring, helping local leaders identify barriers and coordinate with MDAs to tailor solutions at the community level.

Ghana's decentralized planning system thus institutionalizes a planning cycle where national visions and targets are translated into regional and district strategies, and conversely, local realities and needs inform updates to national plans. This ensures coherence but also requires capacity at subnational levels to plan effectively across sectors.

Clean cooking integration into planning

Though it is a national strategy, the M300 Energy Compact explicitly acknowledges the role of local governance institutions and local communities in supporting electricity access and clean cooking. This high-level recognition provides some legitimacy for integrating energy interventions into subnational development plans, particularly where districts seek to align with national priorities and attract development partner support (Energy Compact, 2025).

In this planning context, issues like electricity access, rural electrification, and clean cooking fall under the infrastructure and social development themes that districts are expected to address. In practice, however, the integration of energy – especially sustainable energy and clean cooking solutions – into district development plans has historically been limited. A recent study focused on the Wa Municipality in the Upper West Region found that energy-related projects constituted less than 2% of the projects in municipality development plans (2010-13 and 2014-17), indicating a very low prioritization of energy at the district level (Akrofi et al., 2021). Moreover, the few energy interventions in the Wa development plans have largely focused on extending the grid to communities, with little attention to off-grid renewable energy or clean cooking initiatives.

Part of the issue is that past national policy frameworks and planning guidelines gave little explicit direction on incorporating sustainable energy at the local level (Akrofi et al., 2021). If the NDPC planning guidelines do not emphasize targets like energy or clean cooking (electricity appears once and cooking does not appear), district planners may overlook them amidst competing priorities. While Ghana at the national level has committed to universal energy access and cleaner cooking solutions, these goals are not strongly reflected in bottom-up district planning.

Nonetheless, district development plans typically include a section on infrastructure and services where electricity and cooking can be addressed, though integration into other development priority areas is also possible. Targeted donor support has demonstrated that the potential for this approach. Through the Voice for Change Partnership (V4CP), SNV supported four municipal and district assemblies to mainstream clean cooking initiatives into their official MTDPs, marking one concrete example of clean cooking being institutionalised within Ghana's subnational development planning framework (SNV, 2020; Ghanaian Times, 2019). The intervention also focused on integrating activities such as promotion of improved cookstoves, community awareness raising, and complementary off-grid electrification measures, alongside conventional grid electrification projects. This experience shows that, while energy is often marginal in district plans, subnational governments can effectively incorporate clean cooking and broader energy objectives when

provided with technical assistance and policy support, creating clear opportunities for scaling modern energy cooking interventions through existing planning processes.

However, there is a question about the impact of the V4CP activities in the longer term. For example, the 2024 budgets of Kassena-Nankana Municipal Assembly and Kassena-Nankana West District Assembly, which were two of the districts that V4CP helped to mainstream clean cooking into their MTDPs, do not indicate that there are any activities or expenditures on cooking. There is not much evidence that clean cooking has been integrated into any MTDPs in Ghana, though many of the plans are not publicly available. There is also little information about the five-year clean cooking strategies that were supposedly developed under V4CP for the above-mentioned MMDAs, which is worth further investigation (Ghanaian Times, 2019).