ASSESSING GHANA'S ENERGY TRANSITION ARCHITECTURE UNDER A YOUTH INCLUSION LENS

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Any errors or omissions remain the sole responsibility of the author.

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Abbreviations

AfCFTA – African Continental Free Trade Area
APRA – Africa People-centred Renewable Energy Action
BEV – Battery Electric Vehicle
COTVET – Commission for Technical and Vocational Education and Training
ECOWAS – Economic Community of West African States
ETIP – Energy Transition and Investment Plan
EV – Electric Vehicle
GHG – Greenhouse Gas
GSAP – Green Skills Acceleration Programme
GSS – Ghana Statistical Service
GW – Gigawatt
GWh – Gigawatt-hour
ILO – International Labour Organisation
JET-IP – Just Energy Transition Investment Plan (South Africa)
KPI – Key Performance Indicator
LCOE – Levelised Cost of Electricity
MW – Megawatt
NEET – Not in Employment, Education or Training
NETF – National Energy Transition Framework
NGJS – National Green Jobs Strategy
NMTDPF – National Medium-Term Development Policy Framework
SADC – Southern African Development Community
SAPP – Southern African Power Pool
SEforALL – Sustainable Energy for All
STAR-C – Solar Technical Application Resource Centre
TVET – Technical and Vocational Education and Training
UNDP – United Nations Development Programme
UNICEF – United Nations Children's Fund
WAPP – West African Power Pool
YCC – Youth Climate Council Ghana
YIL - Youth Inclusion Lens

Executive Summary

The architecture of Ghana's energy transition is anchored by the National Energy Transition Framework (NETF) and the Energy Transition Investment Plan (ETIP), which together define the strategic vision and investment pathways of the transition. They chart an ambitious course toward a net-zero economy by 2060, projecting 400,000 net new jobs and a USD 550 billion investment opportunity. Yet these landmark documents give only passive attention to how Ghana's youth which make up roughly 40% of the population will be systematically included as beneficiaries, workers, entrepreneurs, and decision-makers in this transition.

This policy brief assesses Ghana's energy transition architecture through a youth inclusion lens. It identifies three structural gaps: (i) the absence of binding youth employment targets within the NETF/ETIP; (ii) a skills-training ecosystem that remains poorly aligned with green economy demand; and (iii) the exclusion of youth voices from formal energy policy governance. It then benchmarks Ghana against continental peers and proposes a six-point Youth-Inclusive Energy Transition Roadmap for immediate government action.

KEY FINDINGS:

▶ Ghana's energy transition frameworks project 400,000 net jobs yet contain no binding youth employment quota, age-disaggregated targets, or dedicated youth financing window.

▶ Youth aged 20–24 face a 36.7% unemployment rate (Q4 2024, Ghana Statistical Service), making the green transition a critical yet currently missed employment opportunity.

▶ Renewables contribute less than 2% of Ghana's electricity mix against a 10% target by 2030, signaling an urgency to scale up that must be matched by a ready youth workforce.

Background

Ghana's Energy Transition Architecture

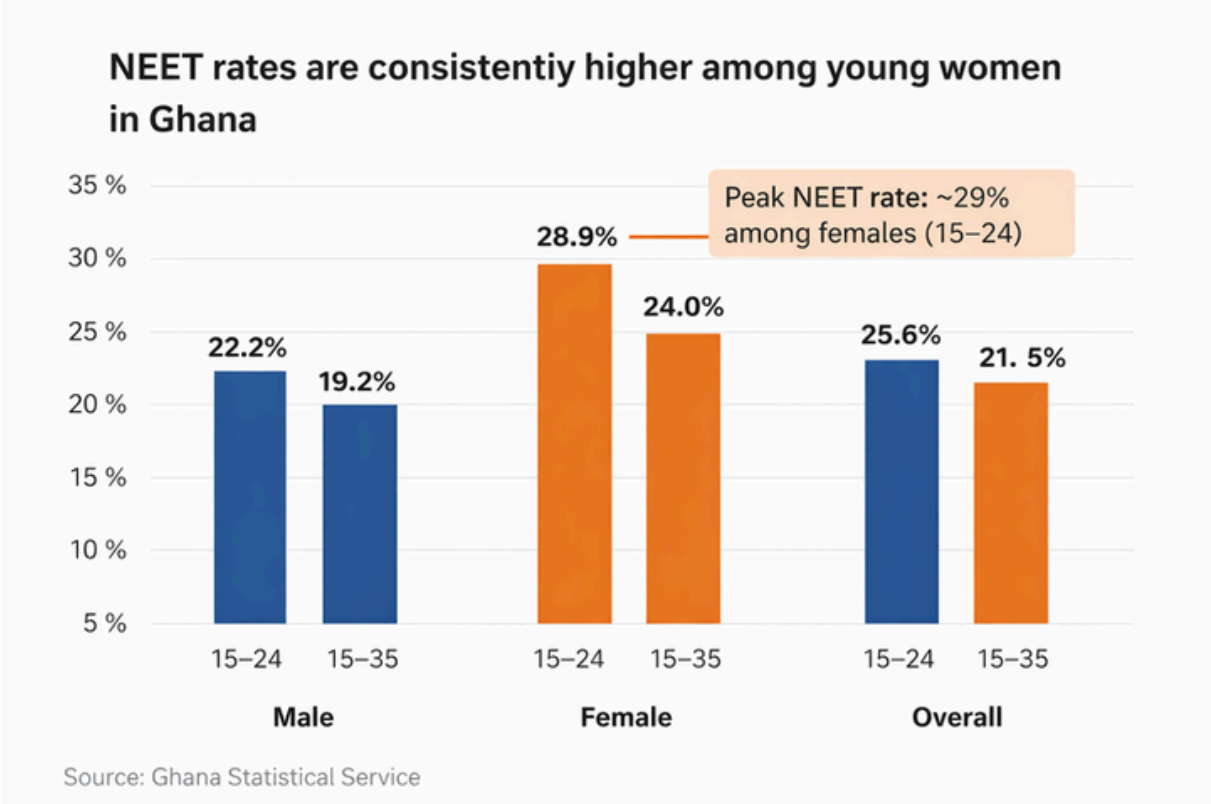
Ghana has developed a layered energy transition architecture over the past four years. The National Energy Transition Framework (NETF), finalised in 2023, sets a pathway to net-zero greenhouse gas emissions, targeting 21 GW of renewable energy within a total installed capacity of 83 GW and an electricity demand of 380,000 GWh. Building on this, the Energy Transition and Investment Plan (ETIP, 2024) accelerated the net-zero target from 2070 to 2060, and identified four primary decarbonisation technologies which are renewables, low-carbon hydrogen, battery electric vehicles, and clean cookstoves to deliver more than 90 percent of the targeted abatement. The Ministry of Energy and Green Transition has further joined the Africa-led Africa People-centred Renewable Energy Action (APRA) framework, which aims to triple African renewable energy goals.

On the ground, progress is measurable but uneven. Installed renewable capacity grew 41 percent from 205 MW in 2024 to 280 MW in 2025. Three new mini-grids have been commissioned in Ada East District serving over 3,700 residents, and a new Renewable Energy Bill has been drafted. National electrification has also reached 86 percent, one of the highest rates in sub-Saharan Africa. Nevertheless, oil and gas still supply over 60 percent of electricity generation, and renewables remain well below the government's own 10 percent target for 2030.

The Youth Imperative

Ghana's demographic profile makes youth inclusion not merely a social imperative but an economic necessity. Young people aged 15–35 represent the majority of Ghana's working-age population, and the country's population is projected to expand significantly before 2050. Yet the labour market data is alarming: youth unemployment among those aged 20–24 reached 36.7% in 2024, the highest across all age groups. The NEET (Not in Employment, Education or Training) rate stood at 25.8 percent for the 15–24 cohort and 22.4 percent for those aged 15–35, amounting to approximately 1.9 million idle young people. Critically, female youth are disproportionately represented in the NEET population, with a rate six percentage points higher than males.

These labour market pressures coincide with a moment of structural economic transformation. Ghana's green transition, if pursued with deliberate youth inclusion, could convert a demographic liability into a dividend. The ILO estimates that globally, 18 million net jobs could be created through just green economy transitions. Ghana's ETIP itself projects 400,000 net jobs from full implementation. The question is whether current policy architecture will channel these opportunities to young Ghanaians, or allow them to be captured by older, better-connected incumbents or expatriate technical labor.



Methodology

This policy brief employs a structured document analysis framework to assess Ghana's energy transition architecture through a Youth Inclusion Lens (YIL). The YIL is an original analytical instrument developed for this study, drawing on two established bodies of literature: The ILO/AU Youth Employment Strategy for Africa (YES-Africa, 2024) and UNICEF's framework for accelerating green school-to-work transitions (UNICEF, 2023) to structure its five evaluative dimensions.

Analytical framework: Youth Inclusion Lens

The YIL evaluates energy transition policy documents against five dimensions of meaningful youth inclusion:

1. **Employment targeting:** Does the document contain age-disaggregated employment projections, binding youth quotas, or dedicated youth labour market KPIs?

2. S**kills alignment:** Does the document articulate a workforce development strategy aligned with its identified decarbonization technology clusters?

3. F**inance access:** Does the document identify dedicated financing instruments accessible to youth-led enterprises or young workers?

4. G**overnance participation:** Does the document establish formal mechanisms for youth representation in implementation, monitoring, or accountability structures?

5. M**onitoring and accountability:** Does the document specify disaggregated data collection obligations that would allow youth-specific outcomes to be tracked over time?

Each dimension was assessed on a three-point scale: Present (the framework explicitly addresses the dimension with binding or measurable commitments), Partial (the framework references the dimension without binding commitments or measurable indicators), or Absent (the framework contains no substantive reference to the dimension). This scoring logic is reflected in the benchmarking table in page 7.

Primary document analysis

Two primary policy documents were analyzed in full: Ghana's National Energy Transition Framework (NETF) and the Energy Transition and Investment Plan (ETIP). Both documents were read in their entirety and examined paragraph by paragraph against each YIL dimension. All references to employment, youth, skills, workforce, governance, and financing were extracted and catalogued. Where language was ambiguous, for instance, references to "green jobs" without demographic disaggregation was recorded as Partial rather than Absent, applying a conservative interpretation that credits the document for raising the issue while noting the absence of enforceable commitments.

Secondary and comparative sources

Primary analysis was supplemented by a desk review of secondary sources, including the 2024 labour market statistics from the Ghana Statistical Service, Kenya's Energy Transition and Investment Plan, South Africa's Just Energy Transition Investment Plan (2023–2027), ILO green jobs literature and implementation reports from ActionAid Ghana and Swisscontact's Green Inclusion programme. These sources served two purposes: first, to contextualize the gaps identified in the primary frameworks against current evidence on Ghana's youth unemployment crisis; and second, to enable the comparative benchmarking in page 7, which situates Ghana's performance relative to continental peers using the same YIL dimensions.

Limitations

This study is subject to three limitations that should be acknowledged. First, the YIL framework is applied exclusively to published policy texts. It does not capture informal commitments, verbal assurances made during stakeholder consultations, or implementation actions taken since the documents' publication. Second, the absence of primary interview data means the perspectives of youth organizations, energy sector employers, and government officials are not directly incorporated, hence a gap that future research using qualitative or participatory methods could address. Third, the Kenya and South Africa comparisons are drawn from published transition documents rather than independent field assessments, meaning the benchmarking reflects stated policy intent rather than verified implementation outcomes.

Assessment of Frameworks

What the Framework Gets Right

Both the NETF and the ETIP contain a number of positive signals for youth inclusion that the government should be credited for:

- The ETIP's projection of 400,000 net jobs explicitly recognizes employment creation as a core co-benefit of the green transition, providing a macro anchor around which youth employment targets could be anchored. This positions the ETIP as a platform for youth-specific labor market commitments, even if none have yet been formalized.

- The NETF's ambition to achieve 21 GW of renewable energy capacity implicitly requires large-scale workforce development, and the ETIP builds on this by identifying four primary decarbonization technologies which are renewables, low-carbon hydrogen, battery electric vehicles, and clean cookstoves, each of which represents a distinct skills and employment cluster that could be deliberately directed at youth.

- The ETIP's identification of a USD 550 billion investment opportunity signals a high-investment transition environment. If structured with youth inclusion conditionalities, this capital pipeline could serve as a lever to mandate youth employment commitments from private developers and public utilities seeking project approvals under the ETIP's investment architecture.

- The NETF's long-term horizon to 2070 further revised by the ETIP to 2060, encompasses the entire productive careers of Ghana's current youth cohort. This intergenerational timeframe strengthens the normative case for embedding youth as central actors, not peripheral beneficiaries, within both frameworks.

Critical Gaps Under a Youth Inclusion Lens

Despite these foundations, a close reading of the NETF and ETIP against a youth inclusion lens reveals three structural deficits:

Gap 1: Absence of Binding Youth Employment Targets
Neither the NETF nor the ETIP contains age-disaggregated employment targets, a dedicated youth employment quota, or measurable Key Performance Indicators for youth participation in the green economy. The NETF's sectoral roadmaps make no reference to demographic composition of the workforce they are meant to mobilize, and the ETIP's investment chapters are silent on how the projected 400,000 net jobs will be distributed across age cohorts, regions, or gender. Without these binding parameters embedded directly in both documents, youth employment outcomes remain aspirational rather than enforceable.

Gap 2: Misalignment of Skills Training with Green Economy Demand
The ETIP identifies four core decarbonization technology clusters which are renewables, low-carbon hydrogen, battery electric vehicles, and clean cookstoves, yet neither the ETIP nor the NETF contains a workforce development strategy or skills pipeline aligned with these clusters. The NETF's employment projections assume a ready labor force without specifying how it will be trained, certified, or recruited. The ETIP's investment plan does not include a skills financing window or a technical and vocational training mandate. As implementation of both frameworks accelerates toward the 2030 interim milestones, this absence of a skills articulation strategy means Ghana risks importing the technical workforce its transition requires rather than developing it domestically among its youth population.

Gap 3: Exclusion from Energy Policy Governance
The stakeholder consultation architecture documented in both the NETF and ETIP engaged banks, industry associations, market women groups, and academic institutions, but neither framework established a dedicated youth constituency, a formal youth representation mechanism, or a youth advisory role within the governance structures overseeing implementation. The NETF's institutional arrangements designate the Ministry of Energy and Green Transition, the Energy Commission, and sectoral agencies as the primary implementation actors, with no youth body among them. The ETIP similarly outlines investment governance and monitoring frameworks without specifying a youth inclusion accountability mechanism. This structural exclusion means that the generation whose entire working lives will unfold within the NETF/ETIP horizon has no formal standing to shape, scrutinize, or hold accountable the policies that will define their economic futures.

Benchmarking against similar frameworks in Kenya and South Africa

Indicator	Ghana — NETF & ETIP	Kenya — ETIP	South Africa — JET-IP
Equivalent transition instrument	Energy Transition and Investment Plan (ETIP), paired with National Energy Transition Framework (NETF)	Energy Transition and Investment Plan (ETIP)	Just Energy Transition Investment Plan (JET-IP) 2023–2027
Explicit youth employment target in transition plan	**[Absent]** ETIP projects 400,000 net jobs but sets no youth-specific target or quota	**[Absent]** ETIP projects 500,000 net new jobs to 2050; no youth disaggregation	**[Present]** JET-IP includes dedicated skills portfolio; youth-led SMMEs explicitly targeted in funding platform
Dedicated workforce / skills chapter in plan	**[Absent]** Skills development referenced but no standalone chapter or implementation mechanism	**[Partial]** Skills and local value addition referenced; no standalone youth workforce chapter	**[Present]** Standalone JET Skills Chapter with private-sector Skills Execution Programme (JET SEP) launched April 2024
Just transition / social inclusion framing	**[Weak]** Transition framed primarily around energy access and investment; social equity not foregrounded	**[Emerging]** Social implications listed as a guiding principle; no dedicated just transition framework	**[Strong]** Justice is the organising principle; Presidential Climate Commission mandated to protect workers and communities
Green finance window targeting youth	**[Absent]** No dedicated green youth finance instrument identified in ETIP or NETF	**[Absent]** No youth-specific green finance window in ETIP	**[Present]** JET Funding Platform (2024) explicitly targets women and youth-led SMMEs; over R70 million mobilized
Youth representation in transition governance	**[Absent]** No formal youth seat in NETF/ETIP governance or oversight body	**[Absent]** No formal youth representation in ETIP governance structure	**[Partial]** Youth organisations consulted during PCC stakeholder process; not embedded in PMU governance
Implementation status	**[Early stage]** ETIP launched; implementation architecture still being developed	**[Early stage]** ETIP formally launched November 2024; roadmaps and priorities being clarified	**[Advanced]** JET PMU established Jan 2023; Implementation Plan approved by Cabinet Nov 2023; sectoral work plans active

Sources: Ghana ETIP (2023); Kenya ETIP (SEforALL / Ministry of Energy and Petroleum, 2023–2024); South Africa JET-IP (Presidency / PCC, 2022–2024); IEA Kenya Energy Policy Review (2024); JET SEP / National Business Initiative (2024).

Youth Inclusive Energy Transition Roadmap

The following six-point roadmap provides actionable recommendations for the Government of Ghana, structured by implementing actor and implementation horizon.

▶ Recommendation 1 — Embed Binding Youth Targets in the NETF/ETIP

The Ministry of Energy and Green Transition should revise the NETF and ETIP to include a binding target of a percentage of all green transition jobs created allocated to youth aged 15–35. This target should be disaggregated by sex and region, with annual reporting to Parliament.

▶ Recommendation 2 — Establish a National Youth Green Economy Council

A statutory advisory body comprising youth representatives from all 16 regions, co-chaired by the Ministry of Energy and the Ministry of Youth Development and Empowerment, should be constituted to provide a permanent youth voice in energy policy deliberation, budget review, and transition monitoring. The council should be resourced with dedicated secretariat funding.

▶ Recommendation 3 — Launch a National Green Skills Acceleration Programme

The Ministry of Education, through COTVET, should accelerate the greening of TVET curricula across all technical and vocational institutions, prioritising solar installation, energy efficiency auditing, EV maintenance, and carbon accounting. The STAR-C model at Ho Technical University should be replicated in at least three additional universities in Northern, Upper East, and Upper West Regions by 2027, capitalising on these regions' superior solar resource base.

▶ Recommendation 4 — Create a Youth Green Enterprise Fund

The Renewable Energy Fund, once operationalized, should allocate a dedicated window of at least 15% for youth-led green enterprises, supported by concessional lending, grants for early-stage ventures, and mentorship through Ghana's District Assemblies and the Ghana Investment Promotion Centre.

▶ Recommendation 5 — Develop an Age-Disaggregated Energy Transition Dashboard

Ghana Statistical Service and the Energy Commission should co-develop a publicly accessible monitoring dashboard tracking youth employment, income, and enterprise creation across renewable energy sub-sectors, updated quarterly. This will enable evidence-based adaptive management and accountability to Parliament.

▶ Recommendation 6 — Integrate Youth Inclusion Standards into Energy Investment Licensing

All new renewable energy project licences above 10 MW should include a mandatory Social and Youth Inclusion Plan as a licensing condition, requiring developers to specify local youth employment targets, apprenticeship ratios, and community benefit arrangements. The Energy Commission should enforce compliance as part of project performance monitoring.

Conclusion

Ghana stands at a consequential intersection: a demographic moment defined by a young and growing population, and a structural moment defined by an energy system undergoing fundamental transformation. The government has demonstrated genuine ambition through the NETF, the ETIP, the Green Jobs Strategy, and the APRA commitment. The architecture is largely in place. What is missing is the deliberate connection between these instruments and the 1.9 million young Ghanaians currently locked out of economic participation.
A youth-inclusive energy transition is not charity, it is rational economics. Every degree of skills misalignment or governance exclusion is a productivity loss that erodes the very 400,000 jobs and USD 550 billion investment return that Ghana is counting on.

Conversely, a generation of green-skilled young Ghanaians energized by meaningful participation, entrepreneurial opportunity, and fair employment would constitute the most powerful engine of sustainable low-carbon growth the country has ever assembled.
The six recommendations in this brief require no new institutional structures from scratch as they require the integration and activation of what already exists, targeted at the demographic that has the most at stake and the most to contribute.

The time to act is now!

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