

THE 10% RENEWABLE ENERGY TARGET

What Ghana's Energy Experience Reveals About the Political Economy of Renewable Transition in Africa

By FIDEP Foundation, in Collaboration with Regional and Local Partners

A Technical Advisory Brief
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Executive Summary

Africa's renewable energy transition has reached a decisive policy moment. Across the continent, governments continue to announce increasingly ambitious climate and renewable energy commitments, yet implementation continues to lag behind ambition. Ghana's experience demonstrates that this disconnect is neither accidental nor primarily technological. This advisory brief argues that the next generation of African energy policy must move beyond target-setting towards governance-centred transition planning. The paper introduces institutional realism as a practical policy doctrine.

Key Advisory Points

1. Transition Credibility Must Become a Policy Asset:

Africa's renewable transition should no longer be evaluated by the ambition of announced targets, but by the credibility of institutions that consistently deliver them. In an increasingly competitive green investment landscape, governance credibility is emerging as a strategic economic asset.

2. Public Sector Solarization and Transformation:

The public sector represents Africa's largest untapped renewable energy market. Converting public institutions into large-scale solar consumers would simultaneously reduce fiscal pressure, stimulate domestic renewable industries, and demonstrate visible state leadership in the energy transition.

3. The Energy Transition is a Political Economy Transition:

The principal barriers to renewable deployment are no longer technological but institutional. Future reforms must therefore focus on reshaping the incentives, governance arrangements and fiscal structures that continue to favour fossil-based electricity systems.

4. Africa Could Lead Through Governance Innovation:

Africa's greatest contribution to the global energy transition may not be the speed of renewable deployment but the development of governance models capable of delivering politically durable and socially inclusive transitions. Leadership will increasingly be measured by institutional innovation rather than policy ambition.

This paper is part of a Special Series developed by FIDEP Foundation through a deliberately structured and collaborative analytical process that brings together field-grounded insight and policy-oriented inquiry. The analysis presented is therefore intended to support more informed and context-responsive decision-making, while contributing to ongoing policy conversations among public institutions, development partners, and actors engaged in climate and resource governance.

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Background: The Political Economy of Targets

Ghana's renewable energy transition has long been trapped between ambition and structural reality. For more than a decade, policy frameworks, donor strategies, and government announcements have repeatedly projected the image of a country poised to become a regional renewable energy leader. The Renewable Energy Act of 2011, the Renewable Energy Master Plan, and successive commitments under international climate frameworks collectively created the expectation that Ghana would steadily diversify away from fossil-fuel dependence. Yet the actual trajectory of the electricity sector tells a different story. Renewable energy penetration outside large hydropower remains marginal, thermal generation continues to dominate the grid, and the country's energy financing architecture is increasingly burdened by debt, payment arrears, and costly contractual obligations.

The explanation for this failure cannot be reduced to technical constraints or insufficient renewable resources. Ghana possesses abundant solar irradiation, significant biomass potential, favorable coastal wind corridors, and growing technological access. The deeper challenge lies in the political economy of the power sector itself: a governance structure shaped by emergency thermal procurement, institutional fragmentation, fiscal pressures, weak implementation discipline, and entrenched commercial interests tied to fossil-fuel generation. The central policy question is therefore no longer whether Ghana should pursue renewable energy, but whether the country is willing to redesign the political and financial architecture that currently makes large-scale renewable integration difficult.

A practical and credible pathway forward requires moving beyond symbolic targets and adopting a transition strategy grounded in institutional realism. Rather than continuing to announce ambitious renewable targets that remain disconnected from implementation capacity, Ghana should pursue a phased and measurable renewable integration framework built around annual incremental gains, institutional stabilization, and immediate reforms that establish long-term credibility. The objective should not merely be to increase renewable percentages on paper, but to build an electricity system capable of sustaining renewable growth without deepening fiscal instability or grid insecurity.

I. Why Ghana Missed Its Renewable Energy Targets

Ghana's renewable energy challenge is fundamentally rooted in the political economy of its electricity sector. The country's energy planning over the past decade has been heavily shaped by the legacy of the 2012–2015 electricity crisis, popularly remembered as “dumsor.” During that period, persistent blackouts generated widespread public frustration, disrupted industrial production, weakened investor confidence, and created intense political pressure on government. In response, policymakers prioritized the rapid expansion of generation capacity through emergency thermal power agreements, independent power producer contracts, and fuel-based generation infrastructure.

While these interventions succeeded in reducing blackouts, they also locked Ghana into a long-term fossil-fuel-dependent energy model characterized by expensive take-or-pay contracts, excess installed generation capacity, and mounting capacity charges. The state now pays substantial fixed

costs for thermal generation infrastructure regardless of whether the electricity is consumed. These obligations continue to consume fiscal space that could otherwise support renewable integration, grid modernization, or distributed energy systems.

The result is a paradoxical energy system in which Ghana simultaneously possesses excess generation capacity and insufficient fiscal flexibility to accelerate renewable deployment. This contradiction reflects a deeper governance problem: the energy sector became structured around short-term crisis management rather than long-term transition planning. Renewable energy, despite strong rhetorical support, was never institutionally prioritized with the same urgency as thermal expansion.

The Electricity Company of Ghana (ECG) further complicates this landscape. Persistent commercial losses, low revenue recovery rates, illegal connections, and financial inefficiencies have weakened the utility's capacity to absorb new renewable investments. Renewable energy developers require stable off-take arrangements, predictable payment systems, and long-term confidence in utility solvency. Ghana's power sector has struggled to provide these assurances consistently. Consequently, renewable energy investment has remained heavily dependent on donor-backed financing mechanisms rather than functioning as a commercially stable sector capable of attracting sustained domestic capital.

Institutional fragmentation has also undermined implementation. Energy planning responsibilities are distributed across multiple agencies with overlapping mandates and inconsistent coordination. Regulatory uncertainty surrounding feed-in tariffs, procurement systems, licensing processes, and renewable incentives has weakened investor confidence over time. Several renewable initiatives announced with political visibility failed to achieve scale because implementation frameworks were either delayed, underfunded, or administratively inconsistent.

The influence of entrenched commercial interests must also be acknowledged. Thermal generation infrastructure is deeply connected to fuel import chains, politically negotiated contracts, and powerful economic actors whose financial interests are tied to the continuation of fossil-based electricity generation. In such a context, renewable energy transition is not merely a technical adjustment; it represents a redistribution of economic and political influence within the energy sector. This helps explain why renewable commitments often remain rhetorically ambitious but operationally slow.

Climate variability now adds another layer of urgency. Ghana's heavy dependence on hydropower from Akosombo and Bui exposes the country to increasing rainfall uncertainty and prolonged drought conditions linked to climate change. Yet instead of accelerating diversified renewable integration as a resilience strategy, the system continues to rely heavily on thermal generation as the default stabilizer of the grid. This dependence increases exposure to volatile fuel prices, foreign exchange pressures, and imported energy costs.

In effect, Ghana's renewable energy shortfall is not primarily a resource problem or even a technology problem. It is a structural governance problem rooted in fiscal instability, institutional inconsistency, and a power sector political economy that rewards short-term thermal dependence over long-term energy transition.

II. A Practical Theory of Change: From Symbolic Ambition to Incremental Transition

Ghana's renewable energy discourse has often been driven by aspirational targets disconnected from implementation realities. The political appeal of announcing ambitious percentages is understandable, particularly within international climate diplomacy and donor engagement spaces. However, repeated failure to achieve these targets gradually erodes policy credibility, weakens investor confidence, and creates public skepticism regarding the seriousness of the transition agenda.

A more credible approach would be to fundamentally redesign Ghana's renewable transition framework around incremental and institutionally achievable benchmarks. Instead of pursuing politically attractive but operationally unrealistic targets, Ghana current policy realities is more suited to adopting a phased renewable integration strategy centered on achieving a minimum additional 1% renewable penetration annually, followed by a comprehensive institutional and technical review.

At first glance, a 1% annual target may appear insufficiently ambitious relative to global climate narratives. In practice, however, such an approach may represent the first genuinely implementable renewable strategy Ghana has pursued in years. The logic behind this proposal is grounded in institutional realism rather than optimism. Sustainable energy transitions are not achieved through declarations alone; they emerge from cumulative reforms, infrastructure adaptation, financial stabilization, and governance consistency.

An annualized renewable integration target creates several strategic advantages. First, it allows energy planners to align renewable expansion with actual grid absorption capacity rather than theoretical projections. Ghana's grid infrastructure currently lacks the flexibility, storage systems, and smart distribution capabilities necessary for rapid intermittent renewable integration at large scale. Incremental growth allows for simultaneous investment in grid modernization without destabilizing electricity reliability.

Second, a phased approach reduces fiscal risk. Ghana's energy sector already faces severe debt pressures and foreign exchange exposure. Aggressive renewable procurement without adequate financial restructuring could unintentionally deepen utility insolvency or increase electricity tariffs beyond politically acceptable levels. Smaller but consistent annual gains provide a financially manageable transition pathway.

Third, incremental targets enhance policy credibility. Investors, development partners, and domestic financial institutions are more likely to support a transition framework that consistently achieves modest targets than one that repeatedly fails to deliver ambitious promises. Credibility itself becomes an economic asset within renewable energy markets.

Fourth, the proposed framework encourages adaptive governance. Renewable technologies, battery storage systems, grid management tools, and energy market structures are evolving rapidly. A five-year review mechanism would allow Ghana to reassess technological readiness,

financing conditions, climate vulnerabilities, and institutional performance before setting the next transition phase.

Most importantly, this theory of change reframes renewable energy transition as a process of institutional transformation rather than purely energy substitution. The objective is not simply replacing megawatts of thermal power with solar panels. The deeper objective is building a financially stable, technically resilient, and politically durable electricity system capable of sustaining long-term decarbonization.

III. Immediate Actions to Build the Foundation for Renewable Transition

For Ghana's renewable transition to become credible, immediate actions must focus less on grand infrastructure announcements and more on foundational reforms capable of restoring institutional confidence and creating practical momentum.

The first priority should be public-sector solarization. Government ministries, schools, hospitals, universities, district assemblies, and military facilities collectively consume substantial electricity volumes and impose major costs on the national grid. A mandatory rooftop solar deployment program across public institutions could rapidly create measurable renewable demand while reducing operational electricity expenditure. Importantly, this strategy also allows government to become a direct market creator rather than waiting for private-sector demand to emerge organically.

Second, Ghana must prioritize decentralized renewable systems for underserved and economically marginal communities. Extending centralized grid infrastructure to remote settlements, island communities, and certain coastal fishing areas often remains financially inefficient. Mini-grids, solar home systems, and community-scale renewable systems can provide faster and more resilient electricity access while immediately increasing renewable penetration rates. Such systems are particularly relevant for climate-vulnerable coastal communities where energy insecurity intersects with livelihood fragility.

Third, ECG's financial stabilization must become a renewable energy priority rather than a separate administrative issue. Without improving revenue collection, reducing commercial losses, and strengthening payment discipline, renewable integration will remain financially unstable. No energy transition can succeed if the central utility lacks fiscal credibility.

Fourth, Ghana should establish a domestic renewable financing mechanism capable of mobilizing local capital. Pension funds, domestic banks, sovereign green bonds, and blended finance structures should be strategically directed toward renewable infrastructure investment. Excessive dependence on donor-driven financing creates vulnerability to shifting international priorities and external economic conditions.

Fifth, grid modernization must begin immediately. Investments in smart metering, battery storage pilots, transmission upgrades, and digital grid management systems are essential for long-term

renewable integration. Renewable energy expansion without grid reform risks increasing instability rather than strengthening resilience.

Sixth, the government should introduce renewable energy obligations for large commercial electricity consumers including mining companies, telecommunications towers, industrial parks, and major retail infrastructure. Corporate power-purchase agreements can accelerate renewable investment while reducing pressure on public financing systems.

Finally, Ghana must establish a more transparent and politically insulated energy governance structure. Renewable procurement processes, tariff-setting mechanisms, and power purchasing arrangements require stronger regulatory credibility and long-term continuity beyond electoral cycles. Without governance reform, even technically sound renewable strategies will remain vulnerable to political disruption.

In many developing countries, renewable transition has stalled because governments pursued headline targets without addressing the underlying governance conditions necessary for implementation. Ghana has an opportunity to avoid repeating this cycle by prioritizing institutional credibility over political symbolism. Ghana's renewable energy future will ultimately depend not on how ambitious its targets appear internationally, but on whether the country is prepared to undertake the difficult institutional reforms necessary to sustain transition over time. The path forward requires realism, discipline, and structural reform. Incremental progress, if consistently achieved, may ultimately prove more transformative than ambitious promises that never materialize.

This paper is part of a Special Series developed by FIDEP Foundation through a deliberately structured and collaborative analytical process that brings together field insight and policy-oriented inquiry. The conceptual approach and intellectual direction were led by the Climate and Energy Team, with the work further shaped through iterative contributions, technical interrogation, and critical reflection from a multidisciplinary team within the organisation. The analysis presented is therefore intended to support more informed and context-responsive decision-making, while contributing to ongoing policy conversations among public institutions, development partners, and actors engaged in climate and resource governance.

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