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Transcending to Unlock West Africa's Energy Future: Reshaping ECOWAS Through Strategic Gas Infrastructure Integration

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This paper is part of the ECOWAS Policy Analysis Series (EPAS)—a flagship initiative that highlights the perspectives of African thought leaders and researchers on ECOWAS. EPAS aims to critically examine the evolution of ECOWAS over the past five decades, from the viewpoint of scholars and citizens alike, and to contribute to a forward-looking vision for regional integration in West Africa. The series is coordinated by the Africa Policy Research Institute as part of the Support to the ECOWAS Commission on Organisational Development project. This project is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ).

INTRODUCTION

The significant natural gas reserves in West Africa present a major opportunity to fuel industrial development and expand electricity access across the region. As of the latest available data, ECOWAS member states collectively hold over 300 trillion cubic feet (Tcf) of proven gas reserves, with the majority concentrated in Nigeria, which held an estimated 211.1 trillion cubic feet (Tcf) of proved natural gas reserves in 2024. Other countries also have significant finds: Senegal reports 100 Tcf, though this figure likely includes unverified or potential resources; Ghana has 2.024 Tcf in 2014; Côte d'Ivoire has 1.191 Tcf in 2019; and Benin holds a modest 0.078 Tcf.

The resources, in principle, provide the opportunity to aid the shift from fossil fuels, which have high emissions, to energy systems that are cleaner and more sustainable, and drive industrialization. However, infrastructure and market integration are severely lacking. Only a handful of cross-border pipelines exist, and most consumer countries still depend on costly diesel or imported fuel. ECOWAS's 2023 Energy Policy explicitly calls for harmonizing energy policies, pricing frameworks and infrastructure to improve governance and access. Without concerted action, countries with gas will continue accelerating ahead, while non-producers remain energy-poor and import-dependent.

To unlock this potential, a range of interlinked barriers must be addressed. The main obstacles fall into three categories: regulatory and institutional fragmentation, external finance undermining ECOWAS coordination, and investment climate and transition risks. We analyze each barrier below and then propose policy reforms grouped around these themes.

BARRIERS TO REGIONAL GAS INTEGRATION

REGULATORY AND INSTITUTIONAL FRAGMENTATION

ECOWAS lacks a unified gas-sector framework. National policies, standards and licensing rules differ widely, so each pipeline or plant must clear multiple approvals.

Likewise, ECOWAS's energy functions are split across multiple agencies (West African Power Pool - WAPP, The ECOWAS Regional Electricity Regulatory Authority - ERERA, ECOWAS Centre for Renewable Energy and Energy Efficiency - ECREEE, and there is no dedicated regional gas master plan. In practice, this means national priorities (e.g., building pipelines for domestic use) dominate over any unified West African gas strategy. For example, a pipeline built to one country's pressure/safety specifications may not meet its neighbor's requirements, forcing delays or costly retrofits.

“Virtually no common regulatory body or information-sharing platform is in place, so cross-border trade in gas remains effectively captive”

This piecemeal approach deters investors and raises costs. ECOWAS itself recognizes that “harmonisation of policy and pricing frameworks” is a prerequisite for better energy sector governance. At present only limited corridors exist (the 678 km West African Gas Pipeline - WAGP from Nigeria through Benin, Togo to Ghana, and the Nigeria–Morocco project). Virtually no common regulatory body or information-sharing platform is in place, so cross-border trade in gas remains effectively captive within national silos. In sum, the absence of a regional gas regulatory regime and common infrastructure standards makes transnational projects technically inefficient and financially unattractive.

EXTERNAL FINANCE UNDERMINING ECOWAS COORDINATION

Global powers such as China and the European Union (EU) have significantly shaped West Africa's development landscape; China as a dominant source of infrastructure investment and project execution, and the EU as one of the region's largest providers of development finance and technical assistance. The extent of their influence has been extensive, rapidly offering an alternative capital source alongside the longstanding support provided by institutions like the World Bank, the African Development Bank, and emerging players such as the Gulf countries, Japan (via Japan International Cooperation Agency - JICA), and South Korea (via Korea International Cooperation Agency - KOICA). These external actors have focused heavily on hard infrastructure (roads, ports, and power facilities), often through bilateral, government-to-government loans. While this provides West African nations with crucial capital, it has also introduced a parallel development agenda that bypasses the ECOWAS as the primary regional coordination framework.

When ECOWAS lacks effective institutions, alignment, and a clear framework, national member countries are incentivized to prioritize bilateral benefits over collective regional strategies. Consequently, external funders adapt by focusing on these national agreements. Projects like the Nigeria-China Ajaokuta-Kaduna pipeline and EU Global Gateway projects often contravene the spirit of regional oversight, resulting in a lack of technical and regulatory harmonization that is essential for a cohesive regional gas market.

INVESTMENT CLIMATE AND TRANSITION RISKS

West African gas projects face global market risks that directly affect financing. The world's push to decarbonize has introduced a high "transition risk" for natural gas: new climate policies, carbon pricing and shifting consumer sentiment can shorten the economic life of gas assets. A recent report warns that faster decarbonization will depress natural gas prices and demand globally, reducing the value of African gas industries and making future Liquefied Natural Gas (LNG) projects less viable. Even attempts to pivot toward domestic markets have limits: African gas prices are often capped by regulators below world LNG prices, so local demand alone may not generate sufficient revenue to attract investors. In practical terms, this means financiers worry that massive pipeline investments might be stranded if renewable energy grows faster than expected.

Combined with these transition risks, West Africa still faces a financing gap. Private capital has been scarce due to perceived instability and low returns. Without concessional support, many projects (which have high upfront costs and dollar-denominated revenues) fail to meet commercial thresholds. The COVID-19 pandemic and Russia-Ukraine shocks briefly sent LNG prices higher (creating a windfall for exporters like Nigeria), but those conditions are volatile. In fact, major institutions caution that beyond already-committed projects, no new gas infrastructure is consistent with a 1.5°C climate pathway, raising doubts about future demand. In this environment, lenders demand guarantees and strong contractual frameworks, which the current region-wide setup does not readily provide.

Taken together, these barriers – regulatory and institutional fragmentation, external finance undermining ECOWAS coordination, and investment climate and transition risks – make regional gas integration daunting. Any strategy must confront both the domestic political economy (how to align incentives of producers and non-producers) and the global backdrop of declining gas demand growth.

POLICY RECOMMENDATIONS

To overcome these challenges, ECOWAS and its partners should pursue targeted reforms in three areas: harmonizing regulations/standards, mobilizing finance and de-risking investment, and strengthening regional governance. Each recommendation below directly addresses the identified barriers.

- **ECOWAS should adopt a binding regional gas code and standardisation protocol that harmonises safety and design standards**, ensuring pipelines built for one country automatically meet neighbouring requirements while also establishing common licensing and approval procedures and transparent tariff-setting rules. This could be supported by the creation of a Regional Gas Regulatory Authority or registry to streamline permits and reduce delays, along with a shared digital database of approved pipeline and plant specifications to prevent costly cross-border revisions. The protocol should further integrate environmental

safeguards, including mandatory methane-leak monitoring and carbon accounting for pipelines. By aligning national regulations, such a measure would lower transaction costs and give private developers greater confidence in consistent approvals and standards across the region.

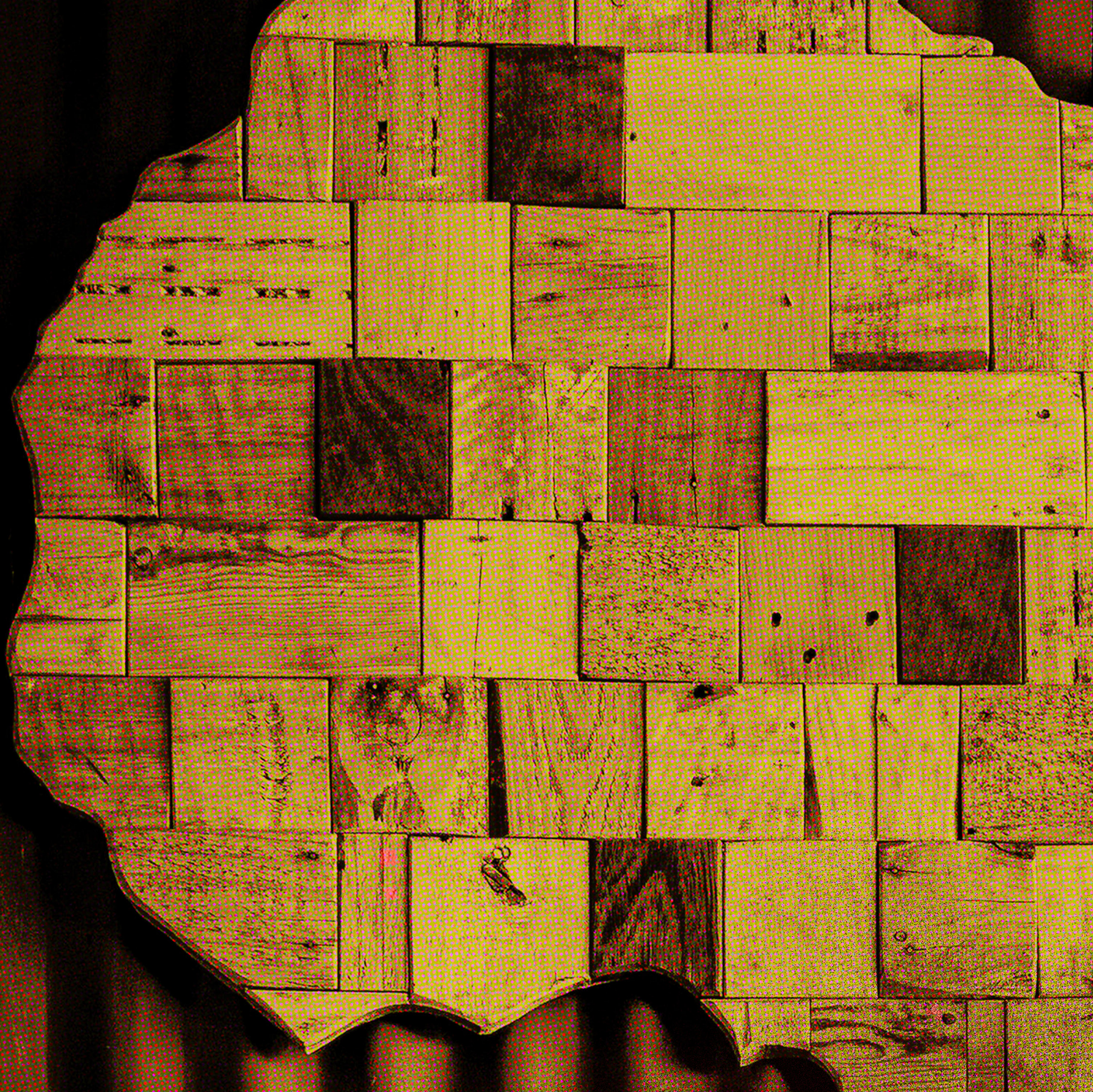
- **ECOWAS should lead the creation of an ECOWAS Gas Infrastructure Development Fund (EGIDF)**, capitalised by member states, development partners, and private investors, to co-finance priority cross-border projects and offer credit enhancements such as partial risk guarantees to attract private capital. The fund could also leverage climate finance by issuing green or sustainability bonds, emphasising that gas-to-power projects, when coupled with emissions-control measures can displace dirtier fuels. To further reduce investment risk, the region could introduce anchor off-take agreements in which power utilities or industrial consumers across multiple countries commit to long-term gas purchases, providing predictable demand needed to secure commercial loans. Additionally, West African states could cooperate to improve overall creditworthiness, including through mutual guarantees, so that lenders view cross-border gas infrastructure as more resilient to market volatility.
- **ECOWAS should establish a West African Gas Task Force** (or a designated directorate within the ECOWAS Commission) bringing together energy ministers, regulators, and private-sector actors to develop a 10-year regional gas roadmap aligned with national development plans, prioritise projects, and oversee implementation. A core mandate of this Task Force must be to ensure that external donors and financiers align their infrastructure investments with the regional roadmap, including making ECOWAS support conditional on adherence to regional standards and governance frameworks so that bilateral initiatives, such as the Nigeria–China Ajaokuta–Kaduna pipeline do not create parallel agendas or fragmentation. Internally, the Task Force should coordinate project licensing to avoid duplication, facilitate negotiations on transit fees and shared ownership to ensure equitable benefits for non-producing states, and ensure compliance with regional agreements. Its governance approach must also be inclusive, integrating social and environmental impact assessments and engaging local communities to build social legitimacy and broad-based support for regional gas initiatives.

West Africa's abundant gas reserves – from Nigeria to Ghana, Côte d'Ivoire, Senegal and beyond – could be the cornerstone of a cleaner, more prosperous energy future. But realizing this promise requires moving beyond fragmented, high-risk projects. By harmonizing rules, mobilizing funds, and building strong regional institutions (as ECOWAS itself envisions), the region can turn its gas resources into shared economic growth. The result would be diversified energy supply, lower power costs, and new industries across West Africa – firmly putting the region on a sustainable development path.

ABOUT THE AUTHORS

Dieketseng Nzhadhaba is a South African policy and energy governance thinker dedicated to advancing Africa's industrial and economic transformation through sustainable energy development. As President of the African Energy and Economic Youth Council (AEEYC), she champions youth-led innovation and regional collaboration in energy policy and infrastructure. Her advocacy focuses on the intersection of natural resource governance, institutional reform, and the political economy of Africa's energy transition. Passionate about inclusive growth and regional integration, she continues to contribute to shaping forward-looking policy discourse across the continent.

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