



2025
September

Fuelling Africa's Future: The Role of Natural Gas in Economic Growth and Energy Transformation



Energy Research Paper

The Al-Attiyah Foundation



The Al-Attiyah Foundation is proudly supported by:



Africa's gas sector is in a pivotal phase, with new exporters expanding the region's role alongside established players. Rising European demand creates opportunities, but export growth faces constraints from production shortfalls, financing gaps, and infrastructure bottlenecks. Converting reserves into 90 BCM/year of production by 2030 requires US\$ 375 billion of investment, underpinned by reforms, risk mitigation, and de-risking finance from ECAs and MDBs. How are producers influencing Africa's gas export future? What are the main opportunities and constraints for exporters, and what investment, governance, or market factors are needed to unlock their potential by 2030? What reforms and international support are needed for Africa to mobilise in the required gas investment?

ENERGY RESEARCH PAPER

This research paper is part of a 12-month series published by the Al-Attiyah Foundation every year. Each in-depth research paper focuses on a current energy topic that is of interest to the Foundation's members and partners. The 12 technical papers are distributed to members, partners, and universities, as well as made available on the Foundation's website.





- New entrants such as Tanzania, Mauritania, and Senegal have the potential to reshape Africa's gas exports, enabling a more balanced and diversified energy economy; their success depends on project maturity, regional partnerships, strong institutions, and cooperation mechanisms that unlock shared opportunities and mitigate risks.
- Algeria and Nigeria remain the anchors for African gas exports, alongside new LNG suppliers. Rising European demand after the Russia – Ukraine conflict increases opportunities but also investment urgency. However, export expansion remains contingent on addressing production shortfalls, infrastructure gaps, and persistent financing challenges.
- Beyond these two, Africa's LNG and FLNG projects span Egypt, Mozambique, Republic of Congo, Cameroon, Equatorial Guinea, Angola, Gabon, Senegal / Mauritania and Tanzania, with several already reaching FID. Timelines and delivery vary, with pre-FID projects facing heightened risks around financing, execution, and evolving start-up windows. New exploration in West and South-West Africa can also fuel future LNG projects.
- Meanwhile, gas-short African countries such as Morocco, Ghana, Guinea, Kenya and South Africa are considering LNG imports to meet demand, supplement declining domestic fields, and/or replace coal and oil consumption. Egypt is both an exporter and an intermittent importer of LNG, depending on domestic demand and seasonal output.

- Algeria will prolong export capacity despite mature-field declines, while Egypt faces sharper production constraints. Libya's rich reserves could add volumes, but progress is hostage to political fragmentation. A newly announced US\$ 8 billion offshore project hinges on governance, revenue-sharing, and budget clarity.
- Nigeria's prospects remain strong, with NLNG Train 7 set to expand exports. Policy initiatives under the "Decade of Gas" spur momentum. Yet without substantial investment, infrastructure growth, and regulatory certainty, the gap between ambition and realised potential will widen.
- Converting 5 TCM of African gas resources into ~90 BCM/year of production by 2030 would require ~US\$ 375 billion of investment, along with decisive project sanctioning, construction, and financing. Outcomes remain highly vulnerable to global gas pricing, carbon rules, and shifting European demand.
- Mobilising the required US\$ 375 billion requires urgent reform, including transparent regulation, investor-friendly policies to facilitate bankable contracts, and alignment with sustainability goals. International capital will flow only if export credit agencies (ECAs), multilateral development banks (MDBs), and blended finance mechanisms de-risk projects at scale, supported by cross-sector cooperation among African stakeholders.
- Projects like Mauritania-Senegal's Greater Tortue Ahmeyim (GTA) cannot secure non-recourse finance alone. Anchor participation from ECAs and development banks remains essential to mobilise vast capital. Without these de-risking entities, large-scale LNG projects will face significant funding delays or outright cancellations.
- African NOCs and independents acquire divested international oil company (IOC) assets, supported by regional lenders potentially including Africa Energy Bank (AEB). Yet capital intensity and technical expertise gaps remain severe. Without stronger government and global partner backing, these vehicles cannot replace international oil company investment.
- Reaching final investment decision (FID) requires overhauled frameworks such as predictable taxation, reliable regulation, and contract enforcement. Utility reforms are vital, alongside currency risk mitigation and bankable offtake agreements. Strengthening utility creditworthiness will be indispensable for attracting global capital and restoring investor confidence across Africa's gas industry.



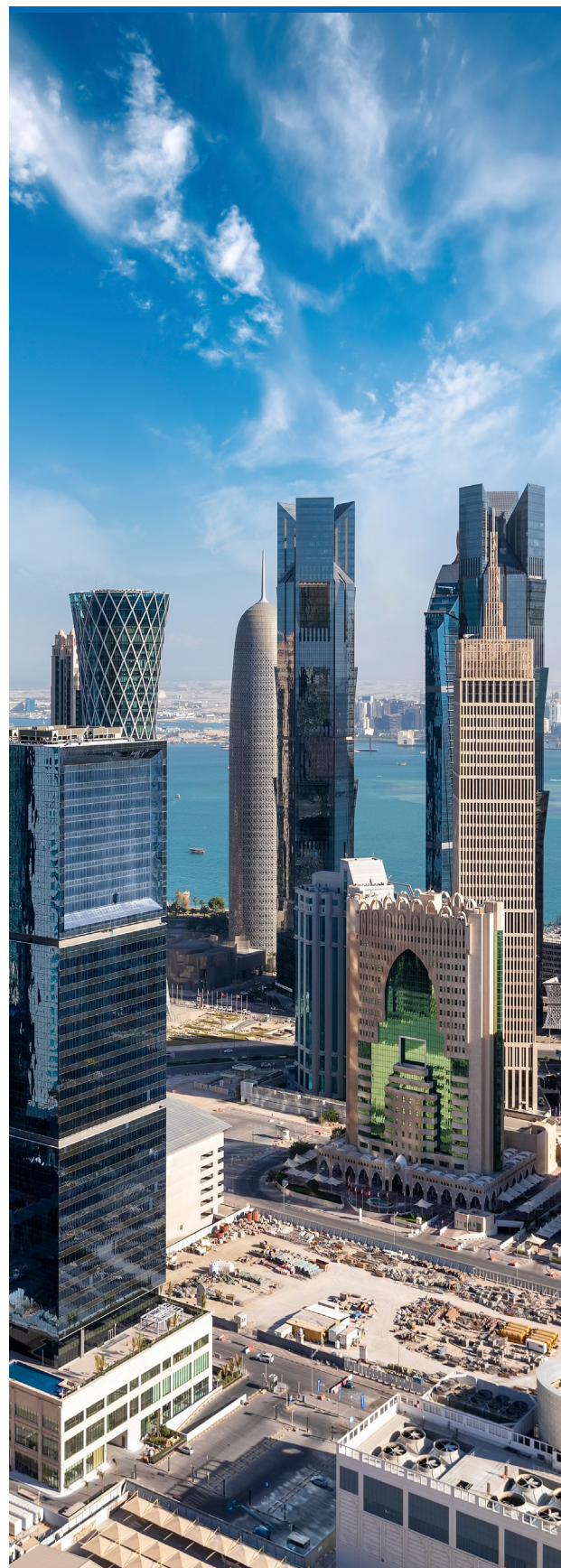
- African projects lag top global peers on costs, after CAPEX inflation, supply bottlenecks, and complexity. Yet reductions are possible through fiscal reform, efficient scaling, streamlined permitting, and localised supply chains. Multi-fuel business models can enhance competitiveness and improve project resilience.
- Gas allocation strategies must balance domestic need with export benefits. Local use drives industrialisation, as Nigeria and Egypt demonstrate. However, in smaller markets like Mauritania, monetised exports provide immediate revenues, underwriting infrastructure that later supports domestic consumption and access.
- Gas-to-power growth depends on transmission, distribution, and grid reliability. Expansion is feasible but may remain limited to 3–5 GW / year until reforms materialise. Renewables' rapid deployment will heighten reliance on gas-to-power for flexibility, stability, and blackout mitigation.
- Replacing ~100 GW of African diesel generators require gas-fired generation, modular turbines, and hybrid systems. Success depends on incentives, utility payment guarantees, and grid expansion. These measures can simultaneously reduce emissions, strengthen energy security, and maintain reliable urban power.
- Africa can unlock large-scale gas-based industries such as fertiliser and methanol production if gas pricing is competitive and policies stable. Egypt, Nigeria, and Morocco already demonstrate success. Yet, many regions struggle, as imports remain cost-effective unless governments

resolve feedstock pricing and infrastructure constraints.

- International Energy Agency (IEA) scenarios remain most credible for African gas outlooks, balancing infrastructure and renewables. Conversely, the Institute of Energy Economics, Japan (IEEJ) expects stronger policy momentum, while BP sees rapid renewable expansion displacing gas. Equinor's Bridges scenario assumes gradual energy shifts, with selective gas growth across targeted regions.



- Gulf investments in Africa blend strategy with economics, sustaining influence while aligning with African priorities. Flexible models spanning LNG, pipelines, and industrial gas enable quick scaling, while securing footholds for long-term geopolitical leverage and mutual development opportunities.
- Gulf countries invest through equity stakes, joint ventures, and project finance in LNG terminals, pipelines, and upstream gas. Sovereign wealth funds ensure operational influence, while financing structures favour flexibility, governance participation, and alignment with strategic infrastructure control and policy partnerships.
- Risk mitigation by Gulf investors relies on state-to-state relations, guaranteed anchor contracts, and flexible financing. Strategic control over infrastructure deepens resilience against project volatility, ensuring long-term positioning in Africa's evolving energy and geopolitical landscape.





Africa's proved gas reserves have been highly concentrated in a few countries, especially Nigeria, Algeria, and Mozambique. However, Tanzania, Mauritania, and Senegal are now emerging as significant potential game-changers with their recent offshore discoveries.

Currently, Africa's total proved gas reserves stand at 13 TCMⁱ. Nigeria is the leading holder, with 5.5 TCM, accounting for one-third of the continental totalⁱⁱ. Algeria and Mozambique are also major holders; the former accounting for 18% of the Africa's reserves, while Mozambique added major new volumes after recent discoveriesⁱⁱⁱ. North Africa (dominated by Algeria) and West Africa (led by Nigeria) collectively account for two-thirds of Africa's total gas reserves.

Infrastructure gaps, small markets and a lack of regional integration have prevented intra-African gas trade from developing

strongly. After the interruption of supplies from Algeria to Morocco for political reasons, the only transnational gas pipelines within the continent are from Algeria to Tunisia, Mozambique to South Africa and Nigeria to several West Africa neighbours. Instead, gas flows to Europe from North Africa via established pipelines. Without deliberate cooperation, concentrated gas resources risk deepening energy poverty for many African countries that lack local reserves or LNG infrastructure. Regional equity is further challenged by insufficient cross-border projects, fragmented regulation, and competitive (rather than collaborative) approaches to gas infrastructure.

Recent years have seen major new discoveries outside traditional hubs, with Mozambique, Mauritania, Tanzania, and Senegal among key new entrants. Senegal and Mauritania, through the offshore Grand Tortue Ahmeyim (GTA) LNG

project, are developing reserves estimated to hold 424 BCM, which will fuel both export markets and domestic consumption^{iv}.

Mauritania is particularly well-placed to benefit, as its smaller population and economy mean gas revenue impacts will be larger per capita than in Senegal.

Tanzania, with significant offshore finds over the past decade and a half, is positioned to become a major gas exporter and regional supplier, supporting East African market integration and electrification goals.

In West Africa, smaller gas producers, often with associated gas, have made progress in monetising resources with floating LNG solutions and local market development, as in Gabon, the Republic of Congo and Equatorial Guinea.

Algeria is the region's leading producer with ~100 BCM/year; Egypt is second producing 48 BCM/year, and Nigeria follows closely with 47 BCM/year^v.

Figure 1: African Gas Reserves

Proved Gas Reserves

Units: trillion cubic metres, TCM

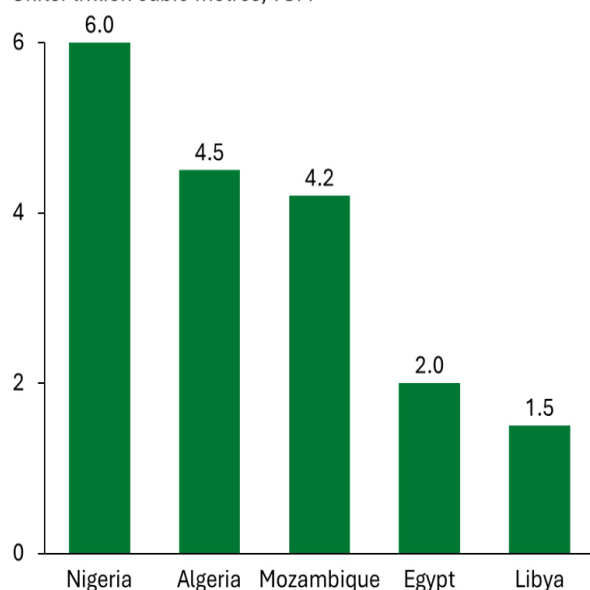
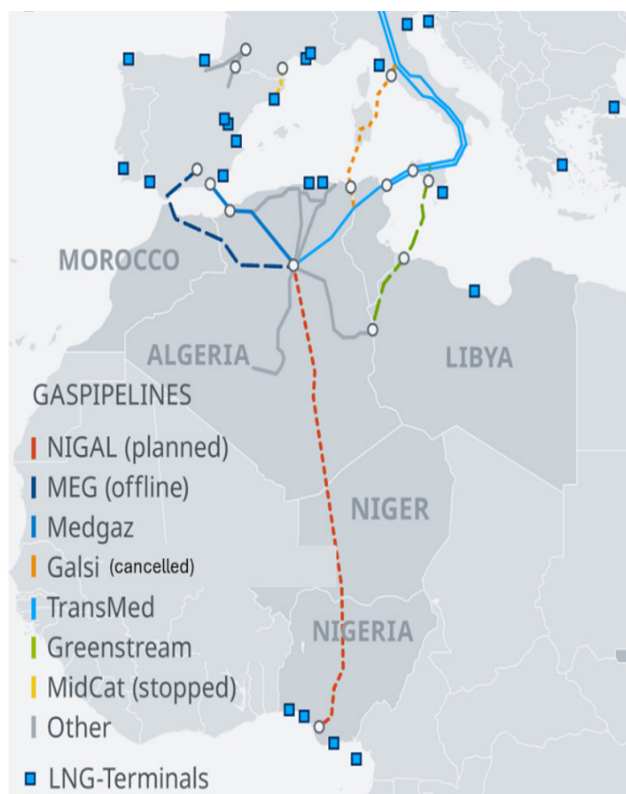


Figure 2: African Gas Pipelines to Europe



Collectively, these countries also account for the bulk of Africa's consumption, with robust domestic industries and power sectors utilising much of their production.

Algeria and Libya export to Europe via pipeline; Nigeria, Algeria, Angola, and Equatorial Guinea are the principal LNG exporters, with Mozambique and Senegal-Mauritania (joint project) emerging. Egypt, once an important LNG exporter, has dropped off seriously as domestic production has fallen, and become a significant importer.

Algeria supplies 31% of Spain's gas imports and 35% of Italy's gas imports via the Medgaz and Transmed pipelines^{vi}. Libya meets 2.5% of Italy's gas imports via Greenstream^{vii}. Mozambique's floating LNG and the new GTA project in Senegal / Mauritania are adding to future supply.

Last year, Africa exported 37 MT / year of LNG and 44 BCM/year by pipeline^{viii}.

Recent successful exploration in Namibia has discovered oil with substantial volumes of associated gas, including most recently a "significant" gas-condensate find at Volans-1X. Further exploration in Namibia, South Africa, and West African emerging deepwater areas such as Côte d'Ivoire and Liberia, could all provide gas volumes for domestic use or LNG in the 2030s.



Following the Russia – Ukraine conflict, Europe's pivot to alternatives, including African gas, has created incentives for expansion, but the region's ability to replace Russian volumes in the short-term is restricted by upstream, infrastructure, and investment bottlenecks. Long-term, Africa stands to gain significantly from new projects (Nigeria – Morocco, FLNGs and, more speculatively, trans-Saharan pipelines), but actual substitution of Russian volumes will require years of sustained development.

Mozambique LNG reached FID in 2019. The project was paused due to security problems in the northern Cabo Delgado province, but now the government and partners are signalling a restart. Construction has resumed, with targeted completion by 2029. Earlier this year, a US\$ 4.7 billion debt facility by the United States EXIM Bank, along with renewed security presence, has improved the likelihood that the revised timeline will be met^{ix}.

Congo's 0.6 Mtpa FLNG project has completed Phase 1 and is operational. Phase 2 (2.4 Mtpa) received FID last month^x. Underwater infrastructure and mooring are currently underway, and the project is expected to be online by the end of this year, making timely delivery very likely.

Gabon's Small LNG project remains pre-FID and the project has not published clear details about start-up dates or capacity, with progress dependent on future investment climate conditions, so the outlook and timing are highly uncertain.

Equatorial Guinea has signed a Heads of Agreement (HOA) with ConocoPhillips for the development of the B/4 and EG-27 offshore gas blocks, which brings approximately US\$ 9 billion in investment and targets estimated recoverable



resources of ~79 BCM of gas in EG-27 and ~20 BCM in B/4, with potential to add significant feedstock for the Punta Europa LNG complex^{xi}.

Chevron, via its Noble Energy subsidiary, has finalised an agreement with Equatorial Guinea to develop the gas associated with the Aseng oil field in Block I. The project is supported by a US\$ 690 million investment and aims to boost gas production by connecting additional gas to the Punta Europa complex, helping address underutilisation at the LNG facility^{xii}. The Aseng project is designed to ensure a reliable LNG supply for export and domestic use.

The GTA Phase 1 in Mauritania-Senegal started LNG exports this year^{xiii}. Phase 2 has not yet received FID, but negotiations are active as of mid-2025. Construction is scheduled to begin later this year. If investments and border negotiations succeed, the first gas could be produced by 2027. There are risks from political or technical delays, but the overall likelihood of timely completion is good.

The Yakaar project in Senegal (Kosmos and state company Petrosen), along with BirAllah in Mauritania, is progressing. Yakaar-Teranga is expected to start production by next year and aims to produce 1.5 BCM/year^{xiv}. BirAllah, with estimated reserves of 80 Tcf and output of 10 Mtpa, is pre-FID, with a planned US\$ 17 billion FID expected this year and production targeted between 2028 – 2030^{xv}. However, following the exit of BP in 2024, it currently does not have international partners and this is likely to delay development until a suitable company enters.



Tanzania's LNG project is currently in the feasibility and negotiation stage. It suffered lengthy delays due to reluctance from the previous administration in Tanzania to offer suitable investment conditions. A pre-FID is targeted for 2026, with first gas expected around 2031. The project is large, with an estimated cost of US\$ 42 billion, and is supported by Shell and Equinor with backing from the government^{xvi}. Its success depends on permitting and fiscal agreements, and the likelihood of delivery in the mid-2030s is moderate to high.

South Africa's offshore Brulpadda / Luiperd project, with 4.5 Tcf of reserves, is currently under development^{xvii}. However, it has been delayed by the exit of TotalEnergies, QatarEnergy and Canadian Natural Resources, leaving Canadian-listed Africa Energy as operator. The remote location and extreme weather are challenges. Start-up is likely around 2033. While regulatory clarity and infrastructure development remain hurdles, the project is making progress toward completion.

Figure 3: Selected Greenfield African LNG Projects

Project	Location	FID Status	Planned Start-up Window
Mozambique LNG	Mozambique	FID 2019, resume confirmed (post-force majeure), funded by US\$ 4.7 billion EXIM	2029
Congo FLNG	Republic of Congo	Phase 1: Operational; Phase 2: FID August 2025, under construction	Q4 2025
Gabon Small LNG	Gabon	Pre-FID, outlook remains highly uncertain, dependent on investment climate	-
GTA Phase II	Mauritania / Senegal	Pre-FID, negotiations active mid-2025; FID possible late 2025	2027 – 2028, if FID achieved
Tanzania LNG	Tanzania	Pre-FID, targeted for 2026, with Equinor / Shell	2031 (if FID in 2026)
Yakaar & BirAllah	Tanzania	Yakaar: Under development, aiming for 2026; BirAllah: Pre-FID, FID possible 2025	Yakaar (2026), BirAllah (2028 – 2030)
Brulpadda / Luiperd	South Africa	Under development; delayed by exit of international majors, led by Africa Energy	2033

ALGERIA SUSTAINS EXPORTS; EGYPT CONFRONTS PRODUCTION CHALLENGES; LIBYA'S POTENTIAL HINGES ON STABILITY; NIGERIA REQUIRES GREATER INVESTMENT



Recent years have seen Algeria stabilise and even raise gas output, just slightly below historic highs despite ageing fields. Output has benefited from new greenfield development, reduced gas reinjection, and investments under improved hydrocarbon laws. Algeria also maintains spare export pipeline and LNG capacity and is a key flexible supplier to Europe, especially after the loss of Russian gas.

Algeria can offset declining output through targeted investment, new licences, and improved technology, but long-term stagnation will persist unless upstream investment accelerates and domestic demand is better managed. European demand security for Algerian gas could be assured with strong political commitment and support for greater energy sector transformation, including compliance with EU environmental regulations^{xviii}. Algeria continues to suffer from

high levels of flaring and methane leakage, leading to an excessive greenhouse gas footprint.

Egypt's gas production has declined from 64 BCM/year in 2022, to three-year lows due to depletion in legacy Nile Delta and Zohr fields^{xix}. New exploration deals are being signed, but progress is slow and rising domestic power demand further limits export capacity.

In the short term, Egypt's capacity to meet growing European demand is severely constrained. Unless new discoveries or well interventions occur, Egypt will rely on imports and scale back LNG exports. Even significant new developments will only fill in for demand growth and declines in existing fields. For Egypt to avoid being a significant LNG importer, it will have to expand imports from Israel and Cyprus, and replace the use of gas in its power sector with renewables and nuclear.

Libya's enormous oil & gas reserves remain underutilised due to ongoing political instability and delayed implementation of key budget / revenue-sharing agreements. ENI has signed a US\$ 8 billion deal to develop two offshore gas fields that could deliver about 9 BCM/year; however, the project progress is vulnerable to factional disputes and the absence of unified governance^{xx}.

For unlocking substantial supply, Libya requires a unified government or functioning power-sharing framework to ensure reliable revenue distribution, the implementation of the 2020 agreement establishing joint technical committees for oil & gas revenues, budget preparation, and dispute resolution, and credible guarantees that NOC revenues and Central Bank payments will be made to all parties per the agreed schedule^{xxi xxii xxiii}.

NLNG Train 7 is approaching completion and likely to proceed on schedule. Construction is > 80% complete^{xxiv}. The expansion will add 8 MT / year to capacity, boosting Nigeria's total to 30 MT / year^{xxv}. All indications and recent investments support on-schedule completion, which would significantly increase LNG output.

The proposed FLNG projects are also attracting investment but face scale and timeline risks. These projects have attracted US\$ 5 billion in new investment commitments, covering both floating and onshore processing plants^{xxvi}. While government backing is strong, delays from regulatory clearances, pricing issues, and funding gaps mean only a portion of proposed capacity may reach FID and grid within this decade.

The "Decade of Gas" policy has gained momentum, yet the full transformation to industrial and power-sector gas use remains stymied by underinvestment and slow implementation. The initiative is anchored in major reforms (Petroleum Industry Act, new infrastructure funding vehicles, Executive Orders for midstream development)^{xxvii}.

~US\$ 400 million has been mobilised for new infrastructure, but most is still seed funding, not yet translating into large-scale pipe, power plant, or industrial capacity^{xxviii}.

Figure 4: Algeria, Egypt, Libya – Supply Prospects & Constraints

Country	Declining Fields Offset	Europe Supply Potential	Key Constraints	Project Outlook
Algeria	Strong, but needs investment	High, pipelines and LNG flexibility	Upstream investment, EU policy	Positive if investments accelerate
Egypt	Weak, urgent interventions	Limited, curtailed LNG exports	Field depletion rising domestic demand	Recovery depends on new finds
Libya	Vast untapped potential	High, with new offshore projects	Political fragmentation, revenue-sharing	US\$ 8 billion project possible, timeline to be confirmed

Full transformation of gas use in Nigeria's power and industrial sectors depends on rapid resolution of domestic pricing issues, scaling gas transmission, and attracting sustained investment. While some progress is visible, meeting "Decade of Gas" goals will require more aggressive funding, improved regulatory clarity, and security stabilisation to ensure long-term confidence and project completion.

Achieving this scale requires the sanctioning, financing, and delivery of major greenfield projects, especially in Mozambique, Senegal, Tanzania, Mauritania, and Nigeria.

The African Energy Chamber projects a need for US\$ 375 billion in upstream, midstream, and infrastructure investment over 10 – 12 years to monetise resources and secure market access, through US\$ 25 – 40 billion / year of investments^{xxix}.

Figure 5: Nigeria Gas — Constraints, Progress, and Prospects

Area	Current Status	Key Bottlenecks	Short-Term Outlook
Reserves	5.5 TCM proven	Flaring, investment, and regulatory delays	Large base, underutilised
NLNG Train 7	80% complete, full commissioning by 2026	Funding, local unrest, global demand	Likely on schedule
FLNG	Investment, policy support	FID delays, scale, funding	Moderate growth, not all projects have reached FID
Domestic Gas	Growing demand	Pricing, infrastructure, supply reliability	Growth possible with reforms
Gas-to-Power / Industry	Policy initiatives	Capital needs, transmission, industry uptake	Execution risk remains

Figure 6: African Conversion, Investment, and Sensitivities

Parameters		Key Bottlenecks
Discovered Resources	5,000 BCM	Proven, but largely underdeveloped
Target Incremental Supply	90 BCM / year by 2030	Timely FID and execution
Total Required Investment	US\$ 375 billion	Financing cycles, macro headwinds
Project Deadlines	Development to start by 2026 – 2027 for 2030 start	Delays cut available supply
Price Sensitivity	Very high	Lower prices could stall expansion
Carbon Policy Impact	High (EU / IEA scenarios)	Tightening policy curtails exports
EU Demand Impact	Critical	Drives Investment Risk

Project timelines signal that the bulk of these key developments must reach FID and start construction by 2026 – 2027 to deliver full flow by 2030, given the typical 4 – 6 year development cycles. Funding sources are expected to be dominated by export credit agencies, international lenders, and (for domestic infrastructure) a mix of public and private investment.

Economic viability of African gas is tightly linked to global spot and contract prices. High prices (like 2022 – 2023) incentivise both LNG and pipeline export investments; a weakening market would delay FIDs and make large projects less attractive or even unbankable.

Stringent EU or global carbon policies and taxes could limit the long-term role of unabated gas in Europe, undermining new project economics unless carbon capture, low-methane certifications, or "green" gas is developed alongside.

If the EU accelerates its decarbonisation pathway or achieves a faster-than-expected renewables buildout, its demand for external gas, especially after 2030, it will fall, leading to risk of stranded assets and underutilized LNG terminals in Africa.

African supply projects are thus highly exposed to policy and market cycles in Europe, with even small shifts in demand or regulatory approach significantly impacting project bankability and the willingness of global capital to invest.



17 AFRICA REQUIRES REFORMS, GLOBAL SUPPORT, AND RISK MITIGATION TO UNLOCK US\$ 375 BILLION IN GAS INVESTMENT



Attracting US\$ 375 billion of investment will require African countries to accelerate sector reforms, standardise bankable and transparent contracts, and align projects with the risk and sustainability criteria of international investors, while leveraging ECAs, MDBs, and innovative blended finance as catalytic instruments^{xxx}. Without this cross-sectoral, multi-instrumental coalition, meeting Africa's gas expansion needs at this magnitude and pace would be very unlikely.

ECAs have been the backbone of recent multi-billion-dollar LNG projects (e.g. Mozambique LNG). Direct loans, ECA-backed bonds, and guarantees will remain core tools for underwriting risk and enabling large capital flows into upstream and midstream projects.

Major IOCs and their consortia (including TotalEnergies, Shell, ExxonMobil, ENI, BP) are

central both as financiers and as project managers, often leading syndicated finance deals, especially for large LNG ventures. NOCs such as ADNOC and QatarEnergy are also growing in prominence as investors in African gas.

The World Bank, African Development Bank (AFDB), European Investment Bank, and Islamic Development Bank are major contributors, accounting for 57% of public energy finance in Africa^{xxxi}. Their blended finance, concessional loans, and infrastructure bonds can lower cost-of-capital and crowd in private investors.

Bilateral lenders and sovereign wealth funds from China, France, Italy, and the United States, as well as fast-growing Gulf investors and strategic funds from major African producers are another source of financing.

Global private equity, infrastructure funds, and African pension funds are increasingly important, often participating via public-private partnerships and direct stakes in midstream/downstream assets.

New sectoral funds, like Nigeria's Midstream and Downstream Gas Infrastructure Fund (MDGIF) and Afreximbank's dedicated project finance arms, are structuring large-scale blended instruments for gas infrastructure buildout.

Nigeria, Mozambique, Egypt, South Africa, Angola, Algeria, Morocco, Ghana, Senegal, and Mauritania are set to absorb most funds, being the region's resource, infrastructure, and creditworthiness hubs.

Instruments like green / blue bonds (with conditional emissions targets), infrastructure REITs, and regional public-private partnerships will be increasingly vital to mobilise risk capital while accommodating climate-policy constraints.

Africa's upcoming LNG phases, especially those at the scale of GTA, will likely be unable to secure entirely non-recourse project finance without anchor roles for ECAs or development agencies, as they remain pivotal for de-risking and mobilising the quantum of capital needed.

Recent megaprojects like Mozambique LNG, Coral FLNG (Mozambique), and GTA Phase 1 in Senegal / Mauritania all relied on ECA, MDA, or multilateral-backed debt as a condition for non-recourse finance.

Securing full non-recourse project finance purely from commercial banks or capital markets for African LNG projects is severely challenging due to elevated political and

sovereign risk profiles, FX and contract enforcement uncertainties, and ESG-related lender restrictions.

Smaller phases or brownfield expansions may explore blended structures, mixing project-level debt with corporate guarantees, equity injections from sponsors, or partial risk guarantees. However, for major greenfield LNG like future GTA phases, strong ECA / MDA participation appears unavoidable to reach financial close on a non-recourse basis.

For smaller domestic gas and downstream projects, balance-sheet (corporate) finance or equity financing often plays a bigger role, especially where investment scale is lower or companies have the financial strength to use existing credit lines / facilities.



Indigenous firms or state-owned companies sometimes use balance-sheet funding, but this significantly increases the risk and capital cost for projects (and is often not viable for multi-billion-dollar LNG facilities).

Equity financing can be used for early-stage or pilot projects, often seen in small-scale LNG, modular / regional gas processing plants, or pilot industrial supply projects. Strong equity funding is still supplemented by project finance for large-scale expansion.

African NOCs now account for more than half of Africa's oil & gas output, absorbing assets from exiting IOCs^{xxxii}. While this shift increases African control and could unlock

new opportunities, most NOCs and local independents face capital, technical expertise, and creditworthiness constraints—especially for large, complex projects.

Improved policy frameworks and innovative partnerships are helping some NOCs (e.g. Nigeria's NNPC, Algeria's Sonatrach, Angola's Sonangol) attract more partners, raise equity through partial privatization, or tap domestic debt markets, but dependence on external capital remains.

For independents, even with favourable divestment terms, access to affordable large-scale capital and advanced technology is a perennial limitation, making them most effective in developing marginal and brownfield assets.

Figure 7: Selected Financing Options and Viability in Africa

Structure	Use-Case	Viability for Large LNG	Viability for Domestic Gas	ECA / MDA Requirement
Project Finance	Export LNG, pipelines	High (need ECA / MDA)	Low – Medium	Nearly essential
Balance Sheet	Domestic, midstream, smaller	Low for large LNG	Medium – High	Rare
Equity Financing	Small / regional, early phase	Supplement Only	High for small projects	Not typically
Blended Finance	Expansion, flexible	Growing, but limited	Growing	Varies

Figure 8: Potential and Limitations — NOCs, Independents, and Regional Vehicles

Entities	Funding Capacity	Strengths	Key Limitations
African NOCs	Medium for top NOCs	Local knowledge, policy leverage	Limited capital, tech, scale
Independents	Small – Medium	Agile, risk tolerant, niche focus	Access to major capital and tech
Regional Banks	Growing, US\$ 5 billion (AEB)	Local alignment, flexible terms	Needs major scaling for large projects
AEB	US\$ 5 billion, targeted	Catalyst function, gap filling	Insufficient for multiple mega projects

The Africa Energy Bank (AEB), a joint initiative of Afreximbank and APPO launched in 2024 – 2025, will become the continent's first pan-African energy sector bank, with initial capitalisation of US\$ 5 billion^{xxxiii}.

The AEB is designed to provide project debt, equity, and risk mitigation for oil & gas projects with a strong local value-add or regional integration focus and offset the retreat of global lenders and offer concessional finance for "transitional" or developmentally justified gas investments.

AEB's US\$ 5 billion seed fund is significant, but annual African upstream and infrastructure funding requirements are US\$ 25 – 40 billion, so a dramatic expansion and crowding-in of sovereign funds, commercial banks, and continental pension / savings capital is essential for transformational impact^{xxxiv}.

Other large regional banks such as AfDB, EcoBank (West / Central Africa), Morocco's Attijariwafa, Banque Misr Egypt, Standard Bank in South Africa and indigenous lenders in Nigeria, Ghana, and Kenya are increasingly providing syndicated loans or targeted project finance.

De-risking African gas projects and reaching FID requires a comprehensive overhaul in legal, fiscal, and regulatory frameworks, targeting greater investment protection, predictable taxation, clear licensing, and robust contract enforcement. Utility reforms, cost-reflective pricing, local currency risk mitigation, and enforceable offtake agreements are also key to restoring utility creditworthiness and unlocking capital at scale.

African countries must update sector-specific laws to clarify exploration, production rights, and revenue-sharing. Regulations

should be modern, consistent, and aligned with international best practices, avoiding retroactive changes or ambiguous language that raise investor uncertainty.

Competitive, stable fiscal policies, including royalty / tax design, incentives for frontier regions, and ring-fenced treatment of gas (vs. oil), give capital providers clarity on returns. Removal of excessive "windfall" taxes or arbitrary risk premiums is critical.

Time-limited, transparent licensing with clear appeal procedures, streamlined permitting, and defined state participation levels attract international and regional capital.

Strengthened judicial or independent arbitration frameworks are crucial for protecting investor rights, improving ratings, and ensuring payment under contracts (such as PPAs or gas sales agreements).





Strong, accountable management and separation of utility finances from government budgets will allow for accurate credit assessments. Regular, audited financial disclosure and sector regulatory oversight will help build trust with lenders.

African utilities must move tariffs, especially for gas-to-power, towards cost-reflective levels, justified by periodic independent reviews, while using targeted subsidies only for vulnerable populations. Credit enhancement (e.g. escrow accounts or government guarantees) for payment obligations is key.

Policy support for local-currency financing, paired with hedging instruments and guarantees, reduces hard-currency risk, lowers capital costs, and enables deeper involvement of pension and insurance funds.

Standardised, enforceable PPAs and gas supply agreements, with escrow accounts and off-taker risk mitigation, help derisk revenue streams and attract private lenders.

Most African gas projects are currently less cost-competitive than global peers, despite their strong technical characteristics, due to CAPEX inflation, supply chain bottlenecks, higher cost of capital, and project complexity. However, targeted measures, including fiscal reform, scale integration, local content optimisation, supply chain localisation, streamlined regulation, and leveraging multi-fuel revenue streams, can materially reduce costs and make investments more attractive.

CAPEX for African LNG and gas projects has risen sharply, driven by post-pandemic supply chain disruption, labour costs, and global materials inflation. Many African projects now lag Qatari and US peers on unit costs and

schedule reliability. Only a minority of current projects are competitive < US\$ 6 – 7 / MMBTU LNG prices, while the global benchmark for new build is trending closer to US\$ 5 / MMBTU.

Key cost reduction levers could be:

- linking gas, LNG, condensates, and liquids for diversified revenue streams (as in Qatar or Nigeria);
- smart, scalable local participation to lower labour and service costs;
- transparent multi-bidder tenders for EPC and technology contracts to resist cost escalations;
- investing in regional fabrication yards, modular construction, and local logistics to reduce delays and currency exposure;
- stable, investor-friendly tax and royalty regimes (e.g. Nigeria Petroleum Industry Act);
- faster, predictable licensing and "one-stop shop" approaches which cut time to FID and lower contingency costs;
- and flaring reduction, electrified infrastructure, and carbon capture which maintain financing and end-market access.



Figure 9: Cost Competitiveness and CAPEX Share Levers

Challenge / Target	Recommended Action	Expected Impact
CAPEX Inflation	Integrated projects, local supply chain, streamlined approvals	Lower per unit cost, site delays
Cost Competitiveness	Fiscal reform, EPC competition, multi-fuel integration	Boost project IRR and FID likelihood
are of Global Upstream CAPEX	More bankable projects, aggressive licensing, risk mitigation	Increases Africa's CAPEX > 10%
Investment Attractiveness	Clear legal frameworks, payment security, sustainability	Unlocks major new capital flows



African countries should balance domestic gas use against exports, a strategy that's most effective when local consumption supports industrialisation or energy access, just as Egypt and Nigeria have linked gas-to-power sector development. However, in markets that are small, unsubsidised or where demand is uncertain (like Mauritania or Mozambique), prioritised exports provide immediate foreign revenue and can help underwrite future domestic infrastructure investments.

Countries like Nigeria and Egypt have shown that domestic gas use can be prioritised successfully when it supports the power or industrial sector, but only if tariffs, infrastructure, and demand are reliable.

Nigeria has targeted gas-to-power programmes under "Decade of Gas," but initially exported most gas due to utility losses and weak demand.

Mozambique prioritised LNG exports given limited and unpredictable domestic demand, then earmarked revenues for future domestic infrastructure. Egypt used initial LNG export profits to invest in domestic sector expansion and grid reliability, increasing long-term local consumption. On a smaller scale, Tanzania has also successfully promoted gas to local industries. The use of gas for mining and minerals processing can improve the reliability of supply and lower cost and emissions by replacing diesel. Given the importance of the mining industry in countries such as South Africa, the DRC, Mauritania, Ghana and Guinea, this would help support the national economy and raise diversification and sophistication. Major mining companies are also creditworthy entities that can help underwrite gas utilisation projects.

Robust cost-reflective pricing is crucial but needs smart design. In Ghana, lifeline tariffs have been offered for low-income households, with phased increases for larger users. Gradually moved to cost-reflective pricing, improving utility finances and attracting investment for new offshore developments. In South Africa, regular tariff evaluations with staged price hikes and direct support-maintained access while improving cost recovery.

Gas-to-power can scale in sub-Saharan Africa only as fast as grid reliability, transmission, and distribution capacity are expanded. With current constraints, accelerated growth is possible but would likely be limited to 3 – 5 GW / year across the region until utility reforms and infrastructure investment catch up^{xxxv}. The rapid deployment of renewables will increase the need for gas-to-power, which is vital as a reliability and grid-balancing tool, especially with Africa's high rate of power intermittency and blackout risk.

Grid unreliability, frequent outages, and underfunded transmission mean new gas-fired plants often run at low capacity or cannot connect rural or peri-urban populations; > 110 million Africans live near the grid but lack access.

Historically, transmission / distribution attracted just 0.5% of energy investment, stalling growth; Ghana, Nigeria, and South Africa experienced overcapacity in generation but failed to resolve grid bottlenecks^{xxxvi}.

Without major regulatory and infrastructure reform, gas-to-power in most countries will be limited to incremental additions, often focused on demand centres or alongside regional power pools.

Renewables account for 27% of Africa's power generation, expected to increase to 43% by 2030, but variable solar / wind created balancing and reliability needs^{xxxvii}. Drought affecting hydropower, as in Zambia and Zimbabwe, is a further reason for gas-fired power to improve reliability.

Gas-fired power plants provide critical backup and grid balancing and can ramp up quickly to meet demand when renewables drop or fail. Countries with aggressive renewables expansion (Morocco, Egypt, South Africa) increasingly combine solar / wind buildout with flexible gas plants; but this synergistic approach stabilises the grid and enables deeper renewables penetration.

The fastest path to displace ~100 GW of diesel generators in African urban grids is large-scale conversion to gas-fired power, paired with gas / renewables hybrid systems; requiring expedited grid upgrades, modular gas turbine rollout, targeted fuel-switch incentives, and improved utility payment guarantees^{xxxviii}.

Rapid conversion of large urban or peri-urban diesel gensets to gas-fired units can leverage existing urban pipelines or "virtual pipelines" (trucking LNG / CNG in absence of pipelines). Small-scale LNG or modular gas turbines are optimal where anchor loads are stable, and transport / fuel logistics support "virtual pipelines." (e.g. mines in Namibia / South Africa and offshore oil & gas fields powering operations via small modular LNG)^{xxxix}.

Hybrid systems integrate rooftop solar or battery storage with gas engines to minimise fuel usage at city level, maximising efficiency and cutting operating costs, as seen in pilot projects in South Africa using hybrid controls and feed-in incentives^{xl}.

Mini-grids / solar lower-density or rural communities, often with highly variable demand are better served by solar or wind-based mini-grids, perhaps with battery-diesel or battery-gas backup. Grid and market reforms could fast-track fuel-switch programmes, guarantee offtake payments, and allow modular / mobile gas power units for high-load districts, while rapidly upgrading distribution systems in large urban grids.

Densely populated peri-urban areas beyond primary grid reach can use modular CNG / LNG units instead of diesel, given reliable supply chains and payment.

Gas-based fertiliser and methanol projects can be viable in African markets with competitive feedstock prices and reliable policy support, especially as countries like Nigeria, Egypt, and Morocco have successfully built large fertiliser complexes that reduce import dependence and supply regional agricultural needs. However, in many cases, imports may remain more competitive unless local gas prices are kept low and infrastructure bottlenecks are addressed.

Subsidising industrial feedstock usually does equate to subsidising exports when goods such as fertiliser or methanol are predominantly exported; Egypt and Nigeria have faced increased fiscal pressures when subsidised gas supplied export-heavy sectors, crowding out domestic supply or leading to revenue leakage^{xli}. A better approach, seen in Morocco and increasingly in Kenya's green fertiliser programme, focused on subsidies on strategic crops or local industries rather than blanket supports for all producers^{xlii}.

Where domestic demand is strong and industrial emissions regulations are tightening, gas use allocated to steel, and cement can sometimes outperform power-sector allocation in both economic and environmental terms. South Africa is piloting hydrogen direct reduced iron (H₂-DRI) and subsidising green hydrogen use to both lower emissions and boost export competitiveness under EU Carbon Border Adjustment Mechanisms (CBAM), which will penalise the domestic coal-heavy steel industry^{xliii}.

Figure 10: Diesel-to-Gas Displacement Strategies

Context	Optimal Solution	Impact
Urban grid, stable loads	Grid gas / hybrid	Scale, fuel efficiency, fast deployment
Industrial / mining, remote	Small-scale LNG / CNG, modular gas	Transportation fuel, stable demand
Rural, low / variable demand	Mini-grid (solar / hybrid)	Lower LCOE, ease of maintenance, grid savings
Peri-urban, weak grid	Modular gas / LNG / CNG	Bridge for main grid, scalable, mobile assets / units

Cement production using gas can deliver significant emissions reductions compared to coal. In many other African markets, low industrial demand or absence of emissions penalties means that power-sector allocation remains the more bankable use of gas.

Blue and green ammonia exports are increasingly viable in regions with carbon pricing and aggressive decarbonisation (e.g. EU and Japan), offering favourable financing and export access to sectors like marine fuel and fertiliser. Morocco and Egypt have fast-tracked green ammonia facilities targeting Europe, while Nigeria is studying blue ammonia based on associated gas with CCUS.

Monetising gas as ammonia faces higher costs than LNG and more pronounced policy / regulatory uncertainty; factors such as EU CBAM can drive rapid market growth, but only where carbon price incentives or transport subsidies are clear.

Blue ammonia benefits from immediate scale and existing industrial demand; green ammonia becomes more attractive as electrolyser and renewable costs decline. Ultimately, the best path for Africa depends on regional policy, carbon pricing, and long-term offtake contracts.



Figure 11: Industrial Gas Use — Viability, Fiscal Impact, Monetisation

Sector	Viability vs Imports	Subsidy Risks	Optimal Conditions	Monetisation Outlook
Fertiliser / Methanol	Egypt, Nigeria, Morocco	Unsuitable for exports, unless targeted	Competitive feedstock, domestic linkage	Both domestic and export possible
Steel / Cement	South Africa, Morocco	Targeted support, regulatory alignment	Export-driven, carbon-sensitive sector	Outperforms power only with emissions policy
Ammonia (Blue / Green)	Morocco, Egypt, Kenya	Targeted, linked to domestic crops	Aggressive carbon pricing, EU / Asia demand	Premium vs LNG in regulated markets

The most plausible scenarios for African gas demand by 2030 and 2050 are those from the IEA and Equinor Bridges, which consider infrastructure limits, affordability, and stronger competition from renewables^{xliv xlv}. IEA scenarios project moderate gas growth, reaching 187 – 246 BCM/year by 2030 and rising only modestly by 2050^{xlvi}. Growth is focused in North and West Africa, the most bankable and infrastructure-ready regions.

IEEJ tends to be markedly optimistic, assuming robust policy-driven gas expansion, while BP Net Zero expects gas to peak before 2030 and then decline sharply as renewables ramp up and climate policies tighten. The IEEJ scenario forecasts much higher demand (potentially 20% or more above the IEA), reliant on widespread CCS and aggressive policy support^{xlvii}. BP Net Zero scenario anticipates gas demand may plateau or decline after 2030, with renewables taking a much larger share, which requires strong, rapid climate policy engagement^{xlviii}.

North Africa's mature markets have limited demand growth potential, especially as gas subsidies are cut and pricing reforms take effect; West African growth depends on industrial investment, while most of sub-Saharan Africa remains constrained by infrastructure and affordability.

In North Africa, gas is already dominant in power generation (70 – 90% in Algeria, Egypt, Libya)^{xix}. There is some scope to displace oil, but otherwise headroom for growth is limited, and most incremental demand will shift from power to industrial sectors (i.e. fertilisers, petrochemicals, urban infrastructure). As subsidies end (e.g. LPG reforms in Morocco), short-term demand may even contract, stabilising before moderate industrial expansion.

The World Bank / IMF suggest, the region could save ~US\$ 27 billion from phased subsidy reduction, but demand growth will largely depend on new industrial applications, not expanded power generationⁱ.

Figure 12: Regional Plausibility of Demand Scenarios

Scenario	2030 Africa Gas Demand	2050 Africa Gas Demand	Regional Highlights	Notes / Drivers
IEA	187 – 246 BCM / year	193 – 437 BCM / year	Moderate growth in North / West Africa	Reflects infrastructure, affordability
IEEJ	20% above IEA	950 BCM increase	Aggressive CCS, optimistic policy	Relies on rapid gas adoption and CCS, experts note it a unrealistic
BP Net Zero	~180 BCM (2030), sharp decline post-2030	75 – 250 BCM / year	Major shift in renewables	Assumes strong climate policy and renewables penetration
Equinor Bridges	Tracks IEA, slightly higher (210 – 250 BCM / year)	Moderate growth	Gradual transitions, selective growth	Mix of policy drivers and market realism

In West Africa, there is significant growth potential if reforms successfully unlock supply, particularly benefiting regional industries and city gas projects in Nigeria, Ghana, and Senegal. However, the pace of infrastructure development and investment remains a key obstacle to realising this potential.

For Central, East and Southern Africa, most scenarios suggest that growth will be gradual and limited, primarily due to infrastructure challenges and affordability issues. Some growth may occur in urban gas-to-power projects and specific industrial hubs, but it is expected to be much less than the growth seen in North or West Africa.



GULF INVESTMENTS IN AFRICA'S GAS SECTOR BLEND ECONOMIC, SECURITY, AND GEOPOLITICAL GOALS THROUGH STRATEGIC PARTNERSHIPS AND FLEXIBLE MODELS

Strategic resource hubs are a key focus for Gulf countries, which favour countries with investment-grade gas reserves such as Nigeria, Mozambique, Senegal / Mauritania, and Egypt. Gulf countries with strong infrastructure integration potential, like Morocco and Ghana, to facilitate efficient energy development and export.

Political and regulatory stability is another important factor. Markets that offer a friendlier investment climate, solid governance, and a proven track record of accommodating foreign capital are highly attractive, which is why Qatar, and the UAE focus on countries like Egypt, Senegal, and Mauritania, given their stable governments and clear energy strategies.

Ecosystem synergies are also prioritised. Gulf investors favour projects that fit into broader development playbooks, such as linking upstream gas production with industrial or hydrogen complexes and port infrastructure (e.g. Senegal's Ndayane Port).

Finally, competitive positioning plays a role. Gulf investors often leverage speed, flexible financing options, and their willingness to develop port and pipeline infrastructure simultaneously to outcompete Western or Chinese rivals, who may move more slowly or adopt different approaches.

Gulf countries have forged partnerships with numerous African countries and government agencies for major gas development, LNG terminals, and pipeline projects. Gulf sovereign wealth funds and private sector entities typically structure participation through direct equity, joint ventures, infrastructure development, and flexible project finance, with a preference for significant operational and governance influence.

UAE (Abu Dhabi's Mubadala, DP World) and QatarEnergy have invested in upstream gas, LNG terminals, and port infrastructure in collaboration with the Nigerian NNPC and Ministry of Petroleum Resources.

QatarEnergy, ADNOC, and others have minority stakes in LNG megaprojects, with Mozambique's Empresa Nacional de Hidrocarbonetos (ENH) as the main government partner.

Saudi Arabia's ACWA Power, UAE's Mubadala, and QatarEnergy are active partners with Egypt's Ministry of Petroleum and Egyptian Natural Gas Holding Company on LNG plants, green ammonia, and gas-to-power initiatives. Saudi Aramco and the UAE have begun technical partnerships and infrastructure collaborations with Libya's National Oil Corporation to restart gas production.



Partnership on the Nigeria-Morocco Gas Pipeline involves Morocco's ONHYM and Nigeria's NNPC, with Gulf investment and technical support; Morocco's fertiliser and ammonia projects also attract UAE and Qatari capital. The Trans-Saharan Gas Pipeline and Nigeria-Morocco projects involve high-level cooperation between NNPC, ONHYM (Morocco), Sonatrach (Algeria), and regional governments, in which Gulf players are financing infrastructure and providing technical support.

Gulf SWFs (e.g. Abu Dhabi Investment Authority, QIA of Qatar, Saudi PIF) prefer to acquire significant equity positions, often demanding minimum investment thresholds and board representation. Collaboration with African NOCs or leading IOCs (e.g. TotalEnergies, BP) is a favoured approach, pooling technology, market knowledge, and risk.

Gulf groups (often via government-linked entities like DP World, ACWA Power, or Aramco) lead or co-invest in building and operating LNG terminals, storage, and port facilities, enabling export connectivity and value-chain control (e.g. DP World's investment in Senegal's Ndayane Port aligns gas logistics with regional export routes).

Gulf funds structure investments using combinations of long-term equity, debt, and guarantees; sometimes with sovereign or multilateral insurance to derisk projects and attract private co-investors. Partnerships between Gulf SWFs, state developers, and African public institutions leverage government guarantees, with risk sharing over 20 – 30-year project timeframes.



Gulf investors assess and mitigate risks in African gas projects by leveraging high-level government relationships, anchor contracts, flexible finance, and often strategic infrastructure control.

In contrast, Chinese investors often undertake resource-backed lending (such as Sinopec's gas-for-infrastructure deals in Angola), whereas European (TotalEnergies, EIB) and US (Chevron, IFC) actors typically use stricter ESG criteria and longer, multilateral negotiation processes. Supply of Chinese equipment and services is a crucial part of China's investment model.

QatarEnergy in Mauritania / Senegal secured 40% stake in a relevant exploration block that could contribute to future LNG projects; joint venture with local NOCs and sovereign guarantees minimised their payment risk.

Mubadala in Egypt structured deals with EGAS and ENI, ensuring joint ventures hold major equity, with payment risk managed by direct government support and multilateral insurance. In comparison, TotalEnergies in Mozambique demanded multi-year power purchase agreements and World Bank-backed guarantees. QIA and Saudi Fund for Development's fast-track diplomatic negotiations with Nigerian and Egyptian governments allowed SWFs to secure deals even during political transitions, contrasting with EIB / EIB's requirement for parliamentary ratification and ESG audits. China (Sinopec) signed bundled infrastructure-energy agreements with Angolan government, leveraging state-backed risk absorption, while US / Europe often require layers of regulatory review.

When local unrest hit LNG facilities in Mozambique, UAE investors worked with regional authorities to re-phase investments

and used private security contractors, while BP and TotalEnergies scaled down on-the-ground presence pending further risk assessment.

Saudi PIF and Mubadala provided early-stage equity in Egypt's LNG and Nigeria's pipeline expansions, which unlocked US\$ 2 – 5 billion in matching funds from World Bank, EIB, and US EXIM, offering project guarantees and syndicated debt. DP World anchored port expansion and gas logistics in Senegal with sovereign and export credit lines, crowding in European ECA participation (e.g. UK Export Finance and French Bpifrance).

Qatar Development Bank issued export credit and insurance lines directly to joint ventures in Mauritania, facilitating equipment imports and mitigating FX and payment risks. Saudi Fund for Development arranged tailored loans for Egypt and Nigeria, with co-financing from AfDB and Arab development banks.





Africa's gas future will be shaped by the "race for scale", where a handful of competitive regional hubs, strong international partnerships (especially with Gulf and selected global players), and deep policy / infrastructure reform unlock wide economic and industrial value. Investors should focus due diligence on local regulatory environments, credit structures, integration opportunities, and evolving gas-to-X pathways, whilst proactively managing geopolitical, security, and ESG risks maximising returns and resilience in Africa's next-generation gas economy.

Nigeria, Egypt, and North Africa will remain regional leaders, but new hubs like Mozambique, Senegal / Mauritania, and Tanzania will enter global LNG markets. Export-led LNG and pipeline projects will continue to anchor investment, but success in scaling domestic gas use for power and industry depends on phased pricing reform, credible utility credit enhancements, and grid

investment, and not just new pipelines or storage alone.

Gulf sovereign wealth funds and private entities will remain critical financiers and partners, leveraging equity, joint ventures, and rapid bridge lending to crowd in global project finance.

Blue / green ammonia, methanol, and fertiliser exports will grow as decarbonisation accelerates globally, challenging LNG's primacy and offering premium returns, especially where carbon policies in the EU / Japan support these new molecules. Rapid scaling depends on integrating backbone pipelines and modular fuel schemes with reliable transmission / distribution; African states must sequence infrastructure investments, derisk contract / payment mechanisms, and link gas expansion to growing anchor demand sectors (industry, urban power, mining) to avoid stranded assets.

- i. Statistical Review of World Energy, Energy Institute <https://www.energyinst.org/statistical-review>
- ii. Statistical Review of World Energy, Energy Institute <https://www.energyinst.org/statistical-review>
- iii. Statistical Review of World Energy, Energy Institute <https://www.energyinst.org/statistical-review>
- iv. Grand Tortue Ahmeyim Field Boosts Senegal and Mauritania Gas Production, Geopolitical Monitor, 2025 <https://www.geopoliticalmonitor.com/grand-tortue-ahmeyim-field-boosts-senegal-and-mauritania-gas-production/>
- v. Statistical Review of World Energy, Energy Institute <https://www.energyinst.org/statistical-review>
- vi. Statistical Review of World Energy, Energy Institute <https://www.energyinst.org/statistical-review>
- vii. Statistical Review of World Energy, Energy Institute <https://www.energyinst.org/statistical-review>
- viii. Statistical Review of World Energy, Energy Institute <https://www.energyinst.org/statistical-review>
- ix. EXIM Board of Directors Votes to Proceed with \$4.7 Billion LNG Equipment and Services Transaction After Four-Year Delay, EXIM, 2025 <https://www.exim.gov/news/exim-board-directors-votes-proceed-47-billion-lng-equipment-and-services-transaction-after>
- x. Nguya FLNG ready for Phase 2 of the Congo LNG project, ENI, 2025 <https://www.eni.com/en-IT/media/press-release/2025/08/nguya-flng-ready-for-phase-2-of-congo-lng-project.html>
- xi. Equatorial Guinea Signs Offshore Gas Deal with U.S. ConocoPhillips, Targets \$9bn Investment, Construction Review, 2025 <https://constructionreviewonline.com/news/equatorial-guinea-signs-offshore-gas-deal-with-u-s-conocophillips-targets-9bn-investment/>
- xii. E. Guinea gets \$690mln Chevron support for Aseng gas field, Econfin Agency, 2025 <https://www.ecofin-agency.com/news-industry/3009-49136-e-guinea-gets-690mln-chevron-support-for-aseng-gas-field>
- xiii. bp completes loading of first cargo from Greater Tortue Ahmeyim LNG project, bp, 2025 <https://www.bp.com/en/global/corporate/news-and-insights/press-releases/bp-completes-loading-first-cargo-from-greater-tortue-ahmeyim-lng-project.html>
- xiv. BP exits the Yakaar-Teranga gas field development project offshore Senegal, Enerdata, 2023 <https://www.enerdata.net/publications/daily-energy-news/bp-exits-yakaar-teranga-gas-field-development-project-offshore-senegal.html>
- xv. Mauritania woos investors to BirAllah gas field, African Business, 2024 <https://african.business/2024/11/partner-content/mauritania-woos-investors-to-birallah-gas-field>
- xvi. LNG projects to watch in Africa in 2024, Further Africa 2024 <https://furtherafrica.com/2024/01/29/lng-projects-to-watch-in-africa-in-2024/>
- xvii. TotalEnergies to spend up to \$3 billion on South Africa gas project, Upstream, 2022 <https://www.upstreamonline.com/field-development/totalenergies-to-spend-up-to-3-billion-on-south-africa-gas-project/2-1-1262263>
- xviii. Another round of Algerian gas for Europe, Real Instituto, 2025 <https://www.realinstitutoelcano.org/en/analyses/another-round-of-algerian-gas-for-europe/>
- xix. Statistical Review of World Energy, Energy Institute <https://www.energyinst.org/statistical-review>
- xx. US firm finds work on \$8 billion gas development in Africa, Offshore Energy, 2025 <https://www.offshore-energy.biz/us-firm-finds-work-on-8-billion-gas-development-in-africa/>
- xxi. Political Turmoil Highlights the Fragility of Libya's Planned Oil Boom, Oil Price, 2024 <https://oilprice.com/Energy/Energy-General/Political-Turmoil-Highlights-the-Fragility-of-Libyas-Planned-Oil-Boom.html>
- xxii. Can Libya Really Double Its Oil Output, Libya Tribune, 2023 <https://en.minbarlibya.org/2023/03/29/can-libya-really-double-its-oil-output/>
- xxiii. LIBYA ECONOMIC MONITOR, The World Bank, 2024 <https://documents1.worldbank.org/curated/en/099140012122442510/pdf/IDU13d87be7a-1b0ad14a82193fc16a5f1106fc61.pdf>
- xxiv. Train-7 gas project now 80% complete – NLNG, PUNCH, 2025 <https://punchng.com/train-7-gas-project-now-80-complete-nlng/>
- xxv. A Legacy of Growth and Innovation, NLNG <https://www.nlng.com/train-7-project/index.html>
- xxvi. How Nigeria's First \$5bn Floating Liquefied Natural Gas (FLNG) Project Will Impact Domestic, Africa, Global Economy, African Business, 2024 <https://african.business/2024/10/apo-newsfeed/how-nigerias-first-5bn-floating-liquefied-natural-gas-flng-project-will-impact-domestic-africa-global-economy>
- xxvii. OIL, GAS MINISTERS SPOTLIGHT RISING GLOBAL CONFIDENCE, STRATEGIC REFORMS, AND INNOVATION DRIVING NIGERIA'S ENERGY SECTOR TRANSFORMATION, Ministry of Petroleum Resources <https://petroleumresources.gov.ng/update/oil-gas-ministers-spotlight-rising-global-confidence-strategic-reforms-and-innovation-driving-nigerias-energy-sector-transformation/>
- xxviii. Nigeria's Gas Infrastructure Fund Hits \$400m

amid Concerns over Decade of Gas Policy Stagnation, This Day, 2025 <https://www.thisdaylive.com/2025/05/08/nigerias-gas-infrastructure-fund-hits-400m-amid-concerns-over-decade-of-gas-policy-stagnation/>

xxix. IEA: Africa needs \$240 Billion to address critical energy demands by 2030, Oil & Gas, 2024 <https://www.oilandgasmiddleeast.com/news/iea-africa-needs-240-billion-to-address-critical-energy-demands-by-2030>

xxx. IEA: Africa needs \$240 Billion to address critical energy demands by 2030, Oil & Gas, 2024 <https://www.oilandgasmiddleeast.com/news/iea-africa-needs-240-billion-to-address-critical-energy-demands-by-2030>

xxxi. Who Finances Energy Projects in Africa, Carnegie Endowment for International Peace, 2023 <https://carnegieendowment.org/research/2023/11/who-finance-energy-projects-in-africa?lang=en>

xxxii. African national oil companies (NOCs) partnering with independents to drive E&P, World Oil, 2025 <https://worldoil.com/news/2025/3/7/african-national-oil-companies-nocs-partnering-with-independents-to-drive-e-p/>

xxxiii. APPO and Afreximbank Sign the Establishment Agreement of the AEB, Declaring it Open for Signature by Prospective Member States, Afreximbank, 2024 <https://www.afreximbank.com/appo-and-afreximbank-sign-the-establishment-agreement-of-the-aeb-declaring-it-open-for-signature-by-prospective-member-states/>

xxxiv. IEA: Africa needs \$240 Billion to address critical energy demands by 2030, Oil & Gas, 2024 <https://www.oilandgasmiddleeast.com/news/iea-africa-needs-240-billion-to-address-critical-energy-demands-by-2030>

xxxv. World Energy Outlook 2024, International Energy Agency <https://www.iea.org/reports/world-energy-outlook-2024>

xxxvi. Power generation overcapacity in selected sub-Saharan African countries: political-economic drivers and grid infrastructure challenges, Frontiers, 2025 <https://www.frontiersin.org/journals/energy-research/articles/10.3389/fenrg.2025.1549844/full>

xxxvii. The State of African Energy 2025 Outlook Report, African Energy Chamber The-State-of-African-Energy-2025_digital.pdf

xxxviii. Belching in the Background: Sizing Africa's distributed diesel power landscape and displacement opportunity, Wood Mackenzie, 2022 <https://www.wood-mac.com/reports/energy-markets-belching-in-the-background-sizing-africas-distributed-diesel-power-landscape-and-displacement-opportunity-150023037/>

xxxix. PolaireTech LNG plants to monetise inland gas

resources, PolaireTech <https://polairetech.com/press-release-polairetech-lng-plants-to-monetise-inland-gas-resources/>

xl. TotalEnergies Launches Innovative Solar Project in South Africa, Energy News, 2023 <https://polairetech.com/press-release-polairetech-lng-plants-to-monetise-inland-gas-resources/>

xli. Agricultural Producer Subsidies: Navigating Challenges and Policy Considerations, International Monetary Fund, 2024 <https://www.elibrary.imf.org/view/journals/068/2024/002/article-A001-en.xml>

xlii. African green hydrogen: Using sustainable fertilisers for industrial and agricultural development in Morocco, Egypt and Kenya, ECDPM, 2024 <https://ecdpm.org/application/files/1117/3324/4396/African-green-hydrogen-Using-sustainable-fertilisers-for-industrial-agricultural-development-Morocco-Egypt-Kenya-ECDPM-Discussion-Paper-2024.pdf>

xliii. South Africa – Steel, MAF <https://mitigation-action.org/projects/south-africa-accelerating-south-african-steel-decarbonisation/>

xliv. World Energy Outlook 2024, International Energy Agency <https://www.iea.org/reports/world-energy-outlook-2024>

xlv. Energy Perspectives 2025 <https://www.equinor.com/sustainability/energy-perspectives>

xlvi. World Energy Outlook 2024, International Energy Agency <https://www.iea.org/reports/world-energy-outlook-2024>

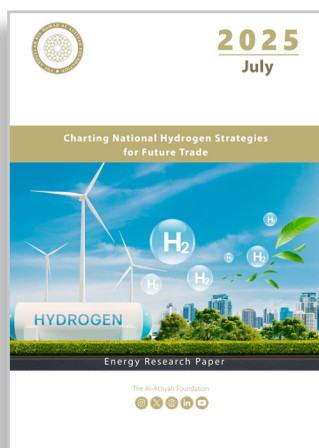
xlvi. IEEJ Outlook 2025 <https://eneken.ieej.or.jp/data/12114.pdf>

xlvi. BP Energy Outlook 2025 <https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/energy-outlook/bp-energy-outlook-2025.pdf>

xlix. IRENASTAT, International Renewable Energy Agency <https://www.irena.org/Data/Downloads/IRENASTAT>

l. Subsidy removal, regional trade and CO2 mitigation in the electricity sector in the Middle East and North Africa region, Science Direct, 2023 <https://www.sciencedirect.com/science/article/abs/pii/S0301421523001428>

Have you missed a previous issue? All past issues of The Al-Attiyah Foundation's Research Series, both Energy and Sustainability Development, can be found on the Foundation's website at www.abhafoundation.org/publications



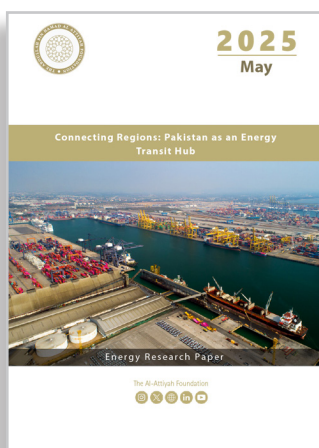
July – 2025

Charting National Hydrogen Strategies for Future Trade

As of June 2024, 61 national hydrogen strategies have been published, revealing diverse ambitions for future trade. However, progress on firm projects has been slow. Most countries aim to become hydrogen exporters, with only 12 planning to import, primarily in Asia and Europe.



(QR CODE)



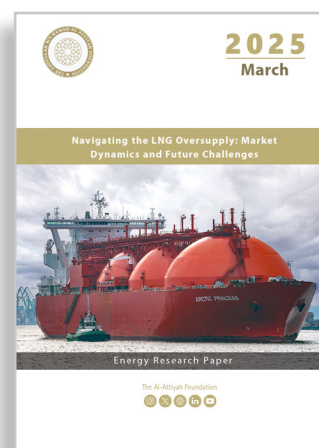
May – 2025

Connecting Regions: Pakistan as an Energy Transit Hub

Pakistan, one of the largest markets around the Arabian Sea periphery, has the potential to become an energy transit country linking the Middle East, Central Asia, and South Asia. However, numerous economic, infrastructure, political and security obstacles hinder reliability and security of supply through Pakistan.



(QR CODE)



March – 2025

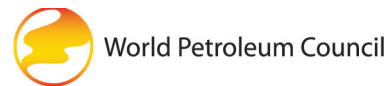
Navigating the LNG Oversupply: Market Dynamics and Future Challenges

Global LNG markets are expected to enter a phase of oversupply in the later part of this decade due to moderate demand growth and a significant influx of new export capacity.



(QR CODE)

Our partners collaborate with The Al-Attiyah Foundation on various projects and research within the themes of energy and sustainable development.





The Al-Attiyah Foundation

Tel: +(974) 4042 8000,
Fax: +(974) 4042 8099
www.abhafoundation.org

Barzan Tower, 4th Floor, West Bay.
PO Box 1916 Doha, Qatar
[Alattiyahfndn](#)

[AlAttiyahFndn](#)
[The Al-Attiyah Foundation](#)
[Al-Attiyah Foundation](#)