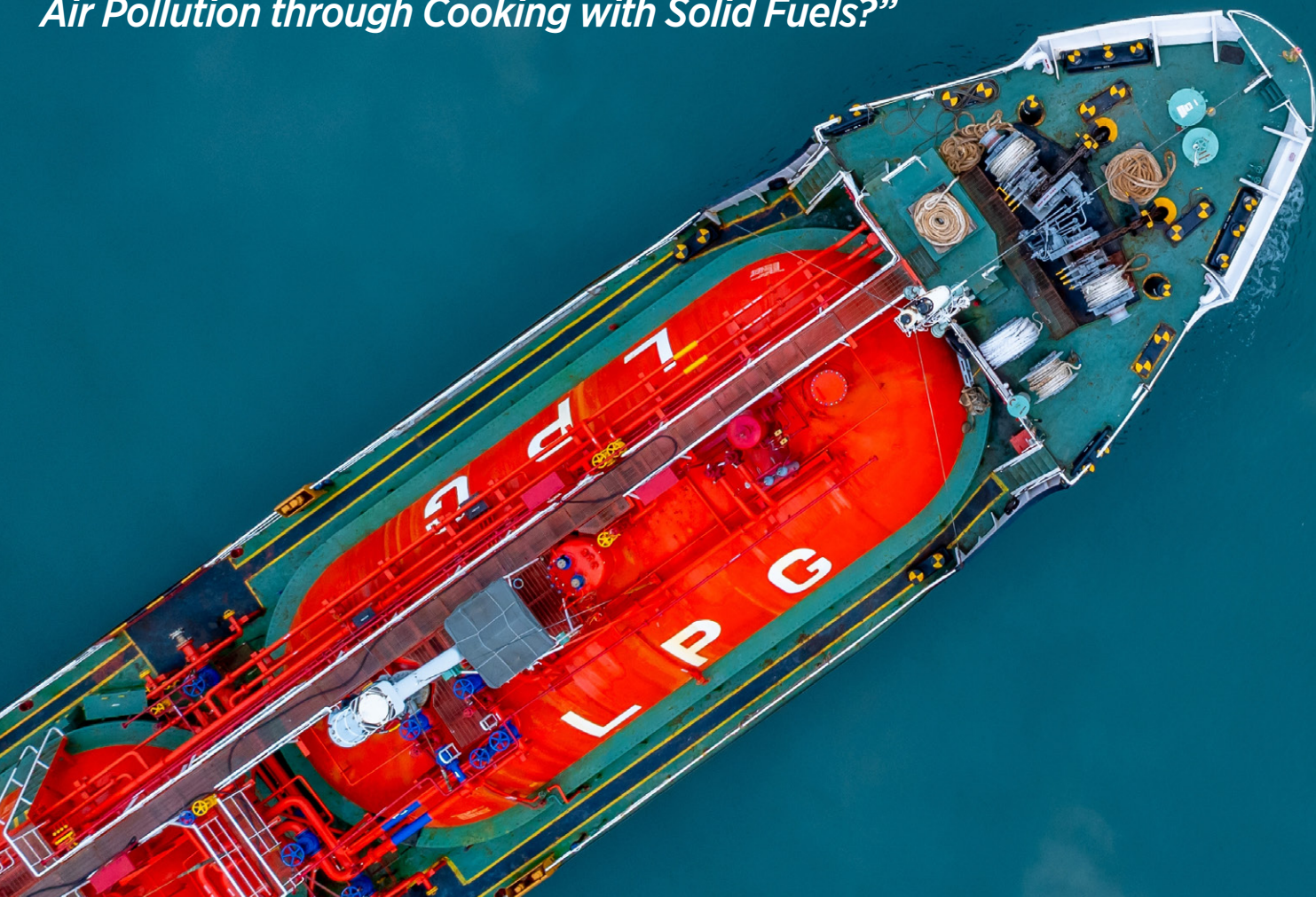


ENOC LPG WHITEPAPER REPORT

*“How to overcome the Risks & Secure the Opportunities
from the Soaring LPG Market in the Global South
where 2 Billion People are still Exposed to Household
Air Pollution through Cooking with Solid Fuels?”*



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UNLOCKING THE LPG OPPORTUNITY

How the East of Suez Can Power the Global South's Clean-Cooking and Industrial Future

The East-of-Suez region stands at the epicenter of a decisive decade for LPG, with over 2.3 billion people still lacking clean-cooking access and 3.2 million deaths annually from household air pollution. This White Paper report outlines how coordinated investment, policy stability, and innovation can turn LPG into both a commercial and humanitarian success story. Drawing lessons from India's 103 million PMUY connections, China's 22.6 mt PDH capacity surge, and record Middle-East exports, it demonstrates how Asia, Africa, and the Gulf can align infrastructure, finance, and inclusion to make LPG the bridge between energy inequality and sustainable prosperity.

The next decade offers a once-in-a-generation opportunity to transform LPG into the backbone of energy access and industrial growth across Asia and Africa. Yet over 2.3 billion people still lack access to clean cooking, with the World Health Organization estimating 3.2 million premature deaths every year from household air pollution caused by burning solid fuels. This staggering health burden underscores why LPG must move from the margins of development policy to its core. Turning energy equity into a global success story will require a coordinated push—combining infrastructure, finance, technology, and policy—to make clean cooking affordable and reliable for all.

INFRASTRUCTURE & FINANCE – BUILDING THE BACKBONE OF ACCESS

The foundation for unlocking LPG potential lies in closing the infrastructure gap. Across the Global South, limited import terminals, storage hubs, and bottling capacity

remain the chief barriers preventing access to affordable clean cooking fuel. Building regional import and storage infrastructure across Africa and South Asia will reduce logistics costs, improve supply reliability, and anchor long-term investment confidence.

India's experience illustrates the scale of what's possible. Through its Pradhan Mantri Ujjwala Yojana (PMUY) program, the country has achieved over 103 million household LPG connections as of March 2025, with demand growing 4–5 percent annually. India now imports roughly 65 percent of its 31 million ton LPG consumption, supported by strategic reserves covering about 17 days of national demand—a critical buffer in a volatile market. During the pandemic, daily cylinder deliveries surged to seven million units, proving that digitalized distribution and subsidy delivery can mobilize massive scale when infrastructure and technology align.

Financing remains the decisive lever. Blended-finance models that combine sovereign guarantees, multilateral loans, and private capital can de-risk projects and attract

investment aligned with the UN Sustainable Development Goals. Framing LPG as a health, gender, and climate solution qualifies it for ESG and green-bond financing, allowing governments and investors to co-fund bottling plants, cylinder manufacturing, and mobile-based distribution networks.

Digitalization and smart monitoring technologies must underpin this buildout. Automated inventory systems, GPS tracking, and blockchain-enabled ESG reporting can transform LPG logistics into a transparent, efficient, and low-leakage network. India's Aadhaar-linked payment architecture offers a replicable model for subsidy efficiency and fraud prevention.

Finally, energy security requires buffer capacity. Expanding national storage to a minimum of 15–20 days can shield economies from shipping disruptions and price shocks. India's doubling of its strategic LPG reserves offers a template for how proactive planning can stabilize markets. With freight volatility—such as Houston–Chiba VLGC rates spiking to \$150 per ton at 2024 highs—building redundancy through regional hubs from Fujairah to East Africa is no longer optional but essential.

POLICY & PARTNERSHIPS – MAKING MARKETS INVESTABLE

No infrastructure can succeed without the right policy scaffolding. Stable government frameworks—including predictable subsidies, tax incentives, and transparent regulation—form the bedrock of investor confidence. Southeast Asia's examples show what works: Indonesia's long-term subsidy policy and Vietnam's infrastructure-led approach have together created a regional growth channel expected to add 5 million tons of LPG demand by 2030, blending social inclusion with commercial viability.

Public–Private Partnerships (PPPs) are equally vital. Governments must evolve from mere procurement to true co-development models with private suppliers. By bundling long-term offtake agreements with infrastructure investment, PPPs ensure both commercial

returns and national energy goals. Sovereign guarantees, risk-sharing funds, and performance-linked incentives can bring private capital into markets once deemed too risky.

The Middle East is uniquely positioned to lead this transformation. As the world's largest LPG export region—with the UAE shipping about 11 million tons and Qatar 10 million tons annually—the Gulf can shift from being a supplier of molecules to a partner in energy development. In Q2 2025, regional exports reached record highs, with China briefly overtaking India as the top recipient. Investing in downstream assets—import terminals, PDH units, and retail networks—across Asia and Africa would secure long-term market access, mitigate freight volatility, and embed Gulf producers as enduring partners in development.

Cross-border LPG corridors add another layer of resilience. Developing alternative supply routes through the Red Sea, Indian Ocean, and East Africa can bypass chokepoints like Hormuz or Bab el-Mandeb, ensuring uninterrupted flows to fast-growing markets. Fujairah's position as both a storage and transshipment hub makes it a natural anchor for this diversified logistics ecosystem.

At the same time, South–South cooperation can accelerate learning curves. India and Indonesia's successful LPG rollout models should be transferred to African and Pacific partners through technical exchange programs, joint training centers, and regional capacity-building platforms—helping new markets avoid early missteps and replicate proven frameworks.

INNOVATION & INCLUSION – EXPANDING ACCESS, DRIVING IMPACT

At the heart of the LPG opportunity lies a social transformation. Across Africa, nearly one billion people still lack access to clean cooking, relying on charcoal, kerosene, and wood that harm both health and forests. Expanding LPG access is therefore not just an energy issue but a human-development mission.

Micro-distribution models—community cooperatives, mobile refill vans, and pay-as-you-go (PAYG) systems linked to mobile-money platforms—can bridge affordability gaps for low-income consumers. East African innovators using PAYG and mobile-money approaches have shown how technology can reduce upfront costs, enable flexible consumption, and create thousands of local jobs in delivery and maintenance.

Supporting local cylinder manufacturing and safety-certified exchange schemes is equally crucial. Many African and South Asian countries face shortages of cylinders and regulators, driving up refill costs and safety risks. Public incentives for local manufacturing and recycling programs can strengthen supply chains and stimulate domestic industry.

Beyond infrastructure, the social narrative around LPG must evolve. Presenting LPG as a climate, health, and gender-equality solution amplifies its resonance with policymakers and financiers. Women—who bear the brunt of traditional cooking—stand to gain through improved health, saved labor hours, and entrepreneurship opportunities in retail and distribution. Embedding these benefits in ESG-linked impact frameworks enhances investor confidence and accountability.

To ensure these social gains are sustained, new clean-cooking alliances should be established—coalitions of governments, NGOs, and energy companies aligning under a unified mission to close the clean-cooking gap by 2030. Such alliances would harmonize fragmented initiatives and elevate LPG's visibility as a central pillar of global energy access.

Meanwhile, data-driven market observatories are essential for accountability. Tracking consumption, pricing, and logistics performance in real time enables governments and investors to fine-tune policy and financing decisions. Transparent data fosters market trust, accelerates private investment, and ensures that expansion remains both equitable and efficient.

Finally, industrial demand offers LPG's strongest long-term anchor. In China, propane dehydrogenation (PDH) capacity reached 22.6 million tons per year by September 2024—up 237 percent since 2019—and another 13.3 million tons is expected by end-2025, alongside a doubling of VLGC-capable terminals (from 23 in 2019 to 41). This industrial expansion guarantees consistent baseline demand that complements household growth, balancing social and commercial imperatives.

CONCLUSION - EXECUTION WILL DEFINE THE WINNERS

The decisive decade for LPG has already begun. Success will depend on disciplined execution, partnership, and vision. Governments must deliver policy certainty; financiers must innovate to close capital gaps; and producers must embed themselves in the social and industrial fabric of emerging markets.

The East of Suez region—anchored by the Middle East's export muscle and Asia's surging industrial appetite—possesses all the ingredients to transform LPG into both a commercial and humanitarian triumph. Yet realizing this potential demands a shift from transactional trade toward long-term collaboration and shared infrastructure.

If Gulf producers, African governments, and Asian consumers align behind a common framework of inclusivity and resilience, LPG can become far more than a transitional fuel. It can become the bridge between today's energy inequality and tomorrow's sustainable prosperity—delivering cleaner air to billions of households, catalyzing regional trade, and powering industrial growth from Fujairah to Jakarta. Those who act boldly—building infrastructure, empowering communities, and forging trust across borders—will not only capture the market but define the legacy of an era driven by energy transformation. ■

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LPG REFINING: Unlocking LPG Growth Across the East of Suez and Global South

LPG REFINING: Unlocking LPG Growth Across the East of Suez and Global South

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From By Product to Strategic Molecule

Liquefied Petroleum Gas (LPG) has evolved from a refinery by product into a critical bridge fuel of the energy transformation. Once treated as residual output from catalytic cracking, LPG now represents a premium molecule that supports both clean cooking goals and petrochemical feedstocks. More than 60 percent of global supply comes from gas processing, while refinery derived output remains below 40 percent.

The United States and the Middle East dominate LPG exports. United States shale growth lifted output to over 80 million tonnes per year in 2024, yet forecasts suggest plateauing by 2028 as shale liquids mature. Asia's dependence on Gulf and African supply will therefore rise, intensifying competition for market access and pricing power.

Refineries must transition from volume driven to molecule driven strategies. Optimizing propane for petrochemical feedstock and butane for household use through catalyst innovation and modular refining can deliver sharper margins. India's refiners are already re engineering Fluidized Catalytic Cracker units to lift yields by up to 15 percent with limited capital reinvestment.

Long term competitiveness, however, lies in integrating LPG into crude to chemicals and propane dehydrogenation projects, converting LPG into propylene, ethylene, and polymers. This integration embeds LPG within the circular economy of advanced materials and shields it from the volatility of liquid fuel markets.

Demand Geography: India's Scale, Africa's Potential

Global LPG demand now exceeds 350 million tonnes and continues to grow 3 to 4 percent annually despite decarbonization pressures. The locus of demand has shifted southward toward India, Southeast Asia, and Sub-Saharan Africa as China gradually electrifies and Japan's mature market contracts.

India remains the anchor of global consumption. It imports 22 to 23 million tonnes yearly, meeting 70 percent of domestic demand. Over 300 million households rely on LPG, compared with just 15 million connected to piped gas. This entrenched dependence ensures durable demand growth even as subsidies are phased out.

Africa represents the next growth frontier. Per capita consumption averages only 4 kilograms annually versus 50 kilograms in India. If usage

reached half of India's level, African demand could surpass 50 million tonnes by 2030. Yet inadequate infrastructure such as ports, storage, bottling, and cylinders constrains expansion.

Gulf producers can unlock this potential through vertical integration by investing directly in African downstream networks, terminals, and distribution systems. The model should be market based, supported by government to government partnerships and blended finance. India's deregulated pricing framework, which maintains targeted support for low income households while enabling market efficiency, offers a replicable template.

Industrial demand is an additional engine. With China moderating refinery runs and United States NGL exports peaking, new LPG to olefins projects in the Middle East, India, and Southeast Asia will create more than 25 million tonnes of PDH capacity over the next decade. This transformation will reposition LPG as an industrial feedstock central to regional manufacturing and exports.

Investment Realities and Policy Alignment

The energy landscape remains defined by a tension between climate ambition and supply realism. Refinery closures in OECD markets coexist with strong demand in the developing world. The IEA projects global oil demand above 105 million barrels per day through 2030, with petrochemicals and LPG as key growth drivers.

For Gulf and Asian producers, project discipline and flexibility are essential. Capital intensive refineries built on 20 year payback cycles no longer fit market volatility or carbon regulations. The next competitive advantage lies in modular, scalable projects integrated across the value chain and located close to end users.

Price will ultimately dictate progress. As global supply tightens toward the late 2020s, LPG prices will rise, incentivizing deferred investments in logistics, upgrading, and processing. Greater adoption of forward hedging and transparent pricing linked to benchmarks like the Argus Far East Index or Saudi Contract Price can enhance stability.

Governments must align policies to sustain market viability, ensuring consistent carbon accounting, fair tariffs, and reformed subsidy systems. Regional energy security will also depend on anticipating geopolitical risks such as sanctions, shipping chokepoints, and the rise of the dark fleet, which now handles nearly a fifth of global product movements.

Fujairah: From Transit Port to Energy Processing Gateway

Fujairah occupies a strategic advantage as the only Gulf port with direct Indian Ocean access outside the Strait of Hormuz. Already a world class bunkering and storage hub, it lacks dedicated LPG infrastructure, a gap that represents opportunity rather than weakness.

Rather than compete with Singapore or Ulsan, Fujairah can differentiate by coupling logistics with value added processing. The roadmap begins with modular storage and blending facilities to optimize propane and butane rich cargoes. This foundation can anchor small scale PDH units or petrochemical plants converting LPG into polypropylene and propylene. Such integration will transform Fujairah from a throughput port to a value creating hub.

Feasibility studies, including the Kinko Project, indicate growing investor interest. Complementary investments in bottling, packaging, and export terminals could link Gulf supply chains with East Africa and South Asia, leveraging Fujairah as the dispatch point for regional clean energy trade.

To attract capital, Fujairah should adopt transparent regulatory frameworks such as competitive tariffs, secure land leases, and customs efficiency. Integration with long term supply from regional NOCs like

ADNOC and ENOC will ensure feedstock stability. Proximity to the world's fastest growing LPG markets India, Pakistan, and East Africa positions Fujairah as the natural bridge between Middle East production and Global South consumption.

Conclusion

LPG's future will hinge not on abundance but on strategic coordination between production, processing, and demand creation. The East of Suez corridor, home to both supply surpluses and demand growth, sits at the heart of this transformation.

To seize the opportunity, energy planners must rethink LPG as an integrated value chain rather than a residual product. The path forward involves optimizing refining capacity, investing in gas-based precision manufacturing, deepening downstream presence in emerging markets, and embedding logistical hubs such as Fujairah into the broader regional ecosystem.

The prize is substantial: a cleaner, more flexible, and commercially resilient energy system that positions LPG as a lasting pillar of global energy transformation rather than a transitional stopgap. ■

Top 5 Recommendations

1. Build and Secure Demand through Downstream Investment in Emerging Markets

Middle Eastern suppliers should invest in LPG logistics and downstream infrastructure including terminals, bottling plants, and inland distribution across India and Africa. Creating demand through infrastructure secures long term offtake, stabilizes cash flows, and positions Gulf producers as partners in expanding clean cooking access and industrial energy use.

2. Develop Regional LPG Trading and Storage Hubs Near Demand Centers

Suppliers should establish regional trading and storage hubs in India or East Africa instead of concentrating infrastructure solely in the Gulf. Proximity to consumers reduces freight exposure, enhances logistical efficiency, and enables arbitrage opportunities that strengthen price discovery and market resilience across domestic and export channels.

3. Upgrade Refinery Yields and Catalysts to Maximize LPG Output

Refineries can raise LPG production by upgrading FCC catalysts and adopting molecular level optimization between propane and butane outputs. Incremental yield gains enhance regional self sufficiency, support industrial integration, and reduce dependency on imported LPG while boosting profitability across existing refinery networks without major capital expenditure.

4. Integrate LPG into Petrochemical Value Chains

Producers should transform LPG from a standalone export commodity into a feedstock for higher value petrochemical chains. Integrating PDH and polypropylene production stabilizes margins, diversifies revenue streams, and strengthens Gulf industrial competitiveness, ensuring LPG remains viable as transport fuel demand plateaus globally.

5. Support Market Creation through G2G Partnerships Instead of Subsidies

Governments and NOCs should promote LPG adoption via long term government to government partnerships rather than subsidies. Agreements covering supply security, technology transfer, and co financed infrastructure will expand access affordably, reduce fiscal exposure, and build enduring economic ties between Gulf exporters and emerging Asian and African markets.



***LPG MIDSTREAM: Fujairah's
Next Frontier – Building an Integrated
Hub for a Low-Carbon Future***

Fujairah's Next Frontier — Building an Integrated LPG Hub for a Low-Carbon Future

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From Storage to Value Creation

Fujairah is entering the next phase of its energy evolution. After establishing itself as one of the world's most important oil bunkering and storage hubs, the emirate is now preparing to extend that leadership into the LPG value chain. The opportunity lies not in storage alone, but in building a fully integrated system that connects refining, condensate splitting, petrochemical feedstock production, and downstream consumption. The goal is not simply to store fuel but to create value through vertical integration and industrial diversification.

This transformation will require a phased and risk-managed approach. Large-scale LPG storage is capital intensive and only viable when backed by stable local and regional demand. To avoid stranded assets, Fujairah's roadmap should begin with small-scale condensate splitting that generates LPG locally and ties production to existing and future users, from petrochemical complexes to domestic distribution networks. Such integration ensures a stable supply base and allows capacity to expand organically in response to market conditions.

By replicating the same step-by-step logic that turned Fujairah from a modest bunkering outpost into a global oil logistics hub, the emirate can build an LPG ecosystem anchored in pragmatism. Early condensate-splitting capacity would grow alongside petrochemical demand, while new facilities for blending, processing, and storage develop in tandem. Over time, Fujairah could evolve into a self-sustaining LPG hub serving both domestic and regional markets across Asia and Africa.

A Strategic Pathway to Energy Diversification

Local LPG production through condensate splitting would not only strengthen industrial resilience but also align Fujairah with global energy transitions. As electrification and clean fuels reshape demand, LPG offers a vital bridge fuel—providing a lower-carbon alternative for industrial, residential, and transport sectors. By positioning itself as a key supplier and logistics center for this transitional fuel, Fujairah can capture growing demand from

developing markets while reinforcing its own energy security.

Economically, this approach makes sense. Producing LPG locally secures feedstock for the emirate's expanding petrochemical base, supports downstream manufacturing, and creates employment. It reduces dependence on volatile imports and enhances export competitiveness. Strategic partnerships with Gulf producers and international energy majors can add both financial capacity and technical expertise, offsetting the high upfront investment costs—often reaching hundreds of millions of dollars for large-scale storage and distribution infrastructure.

Geography adds a further advantage. Located on the Arabian Sea outside the Strait of Hormuz, Fujairah offers secure access to both East-of-Suez and Indian Ocean markets. Its reputation as a neutral, well-regulated trading environment makes it an ideal base for joint ventures and government-to-government supply arrangements. Such partnerships can guarantee both reliability and liquidity across the LPG chain. However, with limited available land, each development must be strategic. Projects should be evaluated not only for immediate commercial returns but also for their long-term alignment with future industries such as hydrogen, ammonia, and carbon recycling. These emerging sectors will define the regional energy map in the decades ahead.

Fujairah's evolution from an oil bunkering center to a diversified energy ecosystem will hinge on linking production, refining, storage, and innovation. The emirate already has the institutional maturity, infrastructure, and strategic vision to lead this transition—provided that its next wave of investments is guided by integration, sustainability, and collaboration across borders.

The Bridge Between Conventional and New Energy Systems

The global energy system is entering an era of transformation, where conventional fuels and new energy technologies must coexist. LPG stands at this intersection. It delivers immediate emissions reductions compared with coal or fuel oil while using existing infrastructure and logistics networks. For developing countries in Asia and Africa, LPG is not only a cleaner energy

option but also a driver of economic inclusion, replacing biomass and kerosene in millions of households. Fujairah's emergence as an LPG hub could therefore have global developmental significance.

Moreover, the emirate's growing marine infrastructure offers an opportunity to pioneer LPG as a marine and industrial fuel. With more than 150 vessels worldwide already powered by LPG, Fujairah could become one of the first ports in the Middle East to offer LPG bunkering services. This would attract early adopters in shipping, stimulate domestic demand, and reinforce Fujairah's brand as a clean-fuel logistics hub. By integrating this capability with its existing bunkering dominance, the emirate could bridge the transition from conventional to new fuels, establishing itself as a reference point for energy innovation.

To achieve this vision, Fujairah must anchor development in a

disciplined, phased roadmap. The first stage should emphasize condensate-based LPG output and limited storage linked to petrochemical feedstock supply. Later stages can expand toward regional trading, cavern storage, and bunkering once offtake and partner commitments are secured. This sequential logic mirrors the formula that transformed Fujairah into a world-class crude oil center—and it will once again ensure that ambition is matched by realism.

The journey toward an LPG-enabled future is not about replicating the past but reimagining it. By combining pragmatic industrial planning with forward-looking clean-fuel strategies, Fujairah can redefine what it means to be an energy hub in the East-of-Suez region: not a passive storage site, but an active engine powering the transition to a low-carbon global economy. ■

Top 5 Recommendations

1. Build an Integrated LPG Value Chain Anchored by Condensate Splitting and Petrochemicals

Fujairah's success depends on establishing local LPG production through condensate splitting rather than relying solely on imports. A domestic splitter feeding an adjacent petrochemical complex would create stable demand, steady feedstock, and value addition—de-risking investment and ensuring consistent throughput for exports.

2. Develop Strategic Partnerships Across the Supply Chain

Forming partnerships with producers such as Qatar, the United States, and Aramco—alongside demand centers like India, China, and Africa—would secure long-term contracts and financing. These alliances can mitigate feedstock risk, anchor offtake commitments, and consolidate Fujairah's position as a neutral, reliable East-of-Suez LPG trading hub.

3. Invest in Scalable Underground Cavern Storage to Lower Unit Costs

Spherical tanks cost around 15 million dollars per 5,000 tons, making rock cavern storage a cheaper alternative. Leveraging Fujairah's favorable geology for underground caverns would reduce capital intensity, enhance storage capacity, and provide strategic stockholding flexibility similar to South Korea's model—strengthening regional energy security and competitiveness.

4. Position LPG as a Transitional Marine and Industrial Fuel

Fujairah can pioneer LPG bunkering and industrial applications by leveraging its current leadership in marine fuels. Promoting LPG as a cleaner, cost-effective substitute for fuel oil would attract early adopters, boost local consumption, and enhance Fujairah's global identity as a clean-energy logistics hub bridging old and new energy systems.

5. Anchor Development in a Phased, Risk-Managed Roadmap

Rather than a single large-scale leap, Fujairah should pursue a gradual rollout beginning with condensate-based LPG output tied to confirmed offtake. Expansion to regional trading, storage caverns, and bunkering should follow once partnerships are secured—mirroring Fujairah's disciplined growth from a bunkering station to a world-leading crude hub.

The Two Pillars of the Global South's Blueprint for LPG Security: Storage & Shipping

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From Storage to Value Creation

LPG markets across the Global South are at a critical crossroads. Demand for liquefied petroleum gas (LPG) is rising rapidly as millions of households transition away from traditional biomass fuels such as charcoal and firewood toward cleaner and more efficient energy sources. Yet, this growing demand is colliding with dangerously inadequate infrastructure. Limited terminal capacity, poor road connectivity, and constrained shipping routes have left many developing countries vulnerable to supply disruptions and price volatility.

To secure long-term access and stability, emerging markets must strengthen two essential pillars: storage capacity and shipping resilience. Together, these pillars provide the foundation for reliable, affordable, and sustainable energy access, vital for social welfare, industrial development, and economic growth.

Expanding Storage: From Vulnerability to Stability

Across Africa, South Asia, and parts of Latin America, LPG storage remains fragmented, small-scale, and outdated. Many import terminals operate with capacities of less than 10,000 tons, forcing frequent resupply and raising exposure to global freight fluctuations. Such inefficiency drives up consumer prices and weakens national energy security.

Expanding large-scale LPG storage is therefore the first step toward stability. When governments provide the right conditions — political stability, land concessions, transparent regulation, and clear pricing mechanisms — investors respond with confidence. Examples from Morocco, Egypt, and Turkey demonstrate this dynamic vividly. Each country leveraged a combination of public-private partnerships and regulatory clarity to attract capital and expertise, transforming their domestic LPG landscapes.

To achieve true cost efficiency, storage tanks must be built at sufficient scale — typically between 25,000 and 44,000 tons per site. These facilities reduce per-unit storage costs, enable better supply management, and provide a buffer against international price swings. But infrastructure alone is not enough. Governments must also invest in associated assets such as pipelines, jetties, bottling plants, and last-mile distribution networks.

A clear, predictable policy environment remains crucial. When public authorities commit to long-term planning, streamlined permitting, and fiscal incentives, private operators can confidently deliver multi-decade projects. Without such collaboration, supply chains remain fragmented, expensive, and exposed to global shocks — perpetuating the cycle of vulnerability that has long hindered energy access in the developing world.

Shipping Resilience and Regional Integration

Storage without efficient transport connectivity cannot secure energy supply. Shipping and inland distribution are equally vital components of a stable LPG ecosystem. Between 2025 and 2027, more than 150 new Very Large Gas Carriers (VLGCs) are expected to enter service — a rare opportunity for Africa and South Asia to align new storage investments with an expanding global shipping fleet.

Yet, most coastal nations in these regions still struggle with congested ports, outdated terminals, and underdeveloped hinterland logistics. Trucks navigate poor roads, causing delays, product losses, and inflated delivery costs. To unlock the full benefit of expanded storage, governments must prioritise modern transport corridors, including road upgrades, rail links, and multimodal transport routes connecting coastal hubs to major population centres.

Every dollar invested in logistics multiplies the benefit of storage expansion. Establishing regional LPG hubs — for example, in Morocco, Nigeria, Kenya, or Tanzania — could generate economies of scale, reduce dependency on single supply routes, and enable cross-border trade. These hubs would act as import, blending, and distribution centres, supporting not only national markets but also landlocked neighbours.

Long-term offtake contracts between governments, traders, and distributors can secure throughput for terminals, stabilise freight demand, and strengthen investor confidence. Similarly, coordinated regional frameworks can harmonise technical standards, customs procedures, and tariffs, transforming fragmented national efforts into continental resilience platforms. By integrating shipping, storage, and market policies across borders, the Global South can achieve the scale and efficiency needed to compete in global energy markets.

Financing the Transition: Partnerships and Policy Certainty

Financing remains the greatest obstacle to large-scale LPG infrastructure development. Most governments in the Global South face fiscal constraints and cannot independently fund the construction of terminals, fleets, or inland storage facilities. This is where multilateral and blended finance models become essential.

Institutions such as the African Development Bank (AfDB), World Bank, and International Finance Corporation (IFC) increasingly recognise LPG as a legitimate transition fuel — one that bridges the gap between traditional biomass and future renewable energy systems. Supporting LPG aligns with global climate and health objectives, as it reduces deforestation, lowers greenhouse gas emissions from open fires, and improves indoor air quality.

Blended finance mechanisms, combining concessional loans with private capital, can de-risk large projects and attract long-term investors.

Development partners are more likely to engage when governments commit to transparent tendering, reliable data, and measurable social benefits.

Policy certainty is just as important as funding. Investors require stability in tariffs, import duties, and safety codes. Governments can enhance bankability by offering duty relief on imported equipment, guaranteeing long-term offtake agreements, and aligning energy policy with broader industrial strategies.

The experiences of India and Egypt highlight what success looks like. Through coherent policy frameworks and strong coordination between public authorities and private operators, both countries managed to expand access rapidly — achieving near-universal household LPG coverage and securing supply through diversified import and storage networks within just a few years.

Social and Environmental Dimensions

The transition to LPG is not merely a technical or economic issue; it is also deeply social. Clean cooking is essential for public health, gender equality, and environmental protection. Each year, around 3.2 million people die prematurely due to indoor air pollution from burning traditional biomass. Replacing these fuels with LPG could save millions of lives and protect forests from unsustainable harvesting.

India's Pradhan Mantri Ujjwala Yojana (PMUY) programme illustrates the transformative power of affordability. By subsidising connections and initial refills for low-income households, the government enabled mass adoption and improved the health and welfare of millions of women and children. Similar schemes could be replicated across Africa through

creative fiscal design, micro-financing, and international donor support.

Environmental advocacy must evolve as well. The LPG industry should coordinate a unified communications campaign to present LPG as part of the global energy transformation rather than a legacy fossil fuel. When framed as a transitional solution that complements renewables, LPG can attract broader political and social backing.

Public-private partnerships that unite policymakers, financiers, and operators are essential to scale such initiatives. By ensuring that affordability and sustainability move hand in hand, the Global South can achieve clean cooking access for all without compromising economic progress.

Conclusion: From Fragmentation to Resilience

Expanding LPG storage and shipping resilience across the Global South is not just an energy priority — it is a moral and developmental imperative. Reliable access to clean, affordable energy underpins education, healthcare, and industrial advancement. Each additional ton of LPG stored and each new vessel route opened strengthens the foundation for inclusive growth.

By investing in large terminals, developing efficient shipping networks, and coordinating cross-border policies, emerging economies can transform vulnerability into strength. Storage delivers stability, shipping ensures flexibility, and together they provide the backbone of lasting confidence and prosperity.

With political will, financial innovation, and international collaboration, the Global South can turn chronic energy insecurity into a story of opportunity and resilience — lighting homes, powering industries, and improving lives for generations to come. ■

Top 5 Recommendations

1. Mobilize Multilateral Financing for LPG Infrastructure

Local governments in Sub-Saharan Africa and South Asia often lack the fiscal capacity to fund large-scale LPG terminals, ports, and storage facilities. The roundtable emphasized leveraging multilateral development banks (AfDB, IFC, IEA, and World Bank) to co-finance strategic hubs. This approach would catalyze private investment by reducing capital risk and supporting credit guarantees for long-term terminal operations.

2. Strengthen Government-to-Government and Public-Private Partnerships

Panelists highlighted that G2G and corporate-government alliances are essential for scaling LPG access. Effective cooperation—between governments, traders, and infrastructure developers—can align national energy plans with private-sector capabilities. Such collaboration ensures regulatory support, open-access terminal models, and shared responsibility for logistics networks and safety standards.

3. Prioritize Policy Stability and Political Security

A recurring theme was that investment confidence depends on political stability and predictable policy frameworks. Investors need long-term clarity on pricing, subsidies, and customs rules to justify large storage projects. Governments must provide de-risking mechanisms, including revenue guarantees or concessional tariffs, to attract private players to frontier markets.

4. Integrate Downstream Bottling and Distribution with Storage Expansion

Storage alone cannot stabilize markets unless paired with bottling plants, distribution networks, and last-mile logistics. The roundtable proposed a vertically integrated model combining large coastal storage terminals with inland bottling partnerships. This ensures continuous LPG flow to households and SMEs—particularly in Africa, where infrastructure gaps are acute.

5. Treat LPG as Strategic Energy Infrastructure

Several participants argued that LPG should be classified as a strategic infrastructure asset, similar to LNG or refined fuels. Recognizing LPG as critical to energy security and clean cooking goals would unlock state incentives, climate-linked financing, and development aid. This status would justify subsidies, accelerate permitting, and prioritize road, port, and pipeline connectivity around LPG hubs.

LPG INTERNATIONAL MARKET: Why Middle East Producers Must Lead the Next Wave of Infrastructure, Pricing, and Policy Innovation



“Anchoring the Next Wave: How LPG Producers Can Build Resilience in a Fragmented Global Market”

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Securing the Future of Global LPG: From Infrastructure to Policy Alignment

As global LPG demand shifts toward emerging economies, producers face a defining challenge: how to secure long term market resilience in an increasingly competitive and volatile landscape. The answer lies in infrastructure leadership, developing the “anchor shorts” that create stability and open new markets.

In Africa and South Asia, the demand story is compelling but constrained. Eleven high opportunity markets in sub-Saharan Africa could see household LPG consumption rise sharply over the next two decades. Yet public and private investment remains limited, as private players tend to avoid the large upfront costs of terminals and distribution networks.

This is where Middle Eastern producers, often state backed, can lead. Establishing import terminals in stable coastal hubs such as Mombasa, Durban or Walvis Bay can anchor inward volumes while enabling downstream bottling, cylinder networks and regional distribution. Co investment models involving national oil companies, international traders and host governments reduce risk and attract capital.

Logistics innovation must complement infrastructure expansion. A “hub and spoke” model, where very large gas carriers offload to floating storage or smaller coastal vessels, can significantly cut freight costs. The Middle East and Africa’s LPG storage market is expanding rapidly and expected to continue growing strongly through the next decade.

Strategically, producers must diversify access points. Supply hubs in politically stable markets like Kenya, South Africa and Namibia can serve as regional re export bases, offering flexibility and reducing geopolitical exposure.

Meanwhile, sourcing strategies must evolve. The United States has become the largest LPG exporter, with cargoes increasingly flowing to Asia. Middle Eastern producers must match this agility, offer flexible routes, and collaborate on terminals and storage solutions to stay competitive.

In short: producers must lead infrastructure development, share risk with governments and partners, and build logistical agility to ensure growth in emerging markets.

Pricing Power and Trading Resilience

The resilience of the international LPG market depends not only on infrastructure but also on how the product is priced, traded and hedged. The current system, dominated by monthly contract pricing, limits flexibility and exposes market participants to volatility. Reforming this benchmark model is essential for Middle East producers to compete with more agile exporters.

Global supply continues to grow, with evolving demand centers and shifting trade flows making price transparency and flexibility vital. India, for instance, remains a major importer but is beginning to diversify its sources.

Producers should support the development of more transparent regional indexes, allowing buyers to hedge and plan procurement. Vertical integration across production, shipping and retail helps absorb benchmark volatility. Producers owning downstream retail or cylinder networks can capture margin and ensure supply reliability.

Standardizing product specifications would further reduce costs. Today, divergent propane and butane blends across African countries complicate logistics. Harmonizing these standards allows larger, more efficient cargoes and predictable pricing.

Producers can also collaborate with financial institutions to expand hedging tools into emerging markets. Forward contracts, swaps, and freight hedges tailored to Africa and South Asia can reduce project risk. Public and private financing can underwrite cylinder and distribution programs, securing long term supply for consumers and investors alike.

In short: pricing and trading resilience depend on transparent benchmarks, flexible contracts and deeper integration between producers and end markets.

Policy Alignment and Energy Transition

LPG’s long-term future will be defined by how producers align sustainability and energy access goals. Clean cooking, emissions reduction, and energy inclusion now dominate global agendas. Producers that position LPG as a bridge fuel within the decarbonization narrative can unlock political support and climate focused financing.

In sub-Saharan Africa, roughly four out of five households still rely on biomass such as wood or charcoal for cooking. Governments and development agencies are pushing for LPG transitions to improve health outcomes, empower women and reduce deforestation. By linking LPG deployment to health, gender equality and climate goals, producers can align with national priorities and secure long-term demand.

Regulatory harmonization is also critical. Weak enforcement of cylinder certification and illegal refilling undermine safety and investor confidence. Establishing frameworks such as cylinder recirculation models and digital tracking systems are essential first steps toward sustainable markets. Digitally managed tracking and refill authorization systems enhance safety and build consumer trust.

Local manufacturing and workforce training further reinforce resilience.

Investing in cylinder production and distributor training reduces import dependency while creating jobs and community acceptance. Locally produced cylinders also lower logistical costs and taxes.

Financing innovation will be vital. Redirecting carbon revenues from emissions trading or climate finance mechanisms into LPG infrastructure such as terminals, cylinders and retail networks can accelerate access and align with environmental objectives.

Finally, producers must frame LPG as an enabler of the energy transition rather than a legacy fuel. In countries where electricity tariffs are rising, LPG is emerging as a cheaper and cleaner household option. Such narratives strengthen LPG’s role within national energy policies and sustainability frameworks.

In short: aligning LPG with clean cooking, employment and emissions goals converts it from a commodity export into a strategic instrument of sustainable development.

Conclusion: From Volatility to Vision

To build resilience and competitiveness, LPG producers must evolve from passive suppliers to proactive architects of market ecosystems. Infrastructure investment, pricing reform and policy alignment are the three pillars of a sustainable future.

Investment in anchor hubs and co funded distribution systems can stabilize supply. Transparent benchmarks and hedging tools restore trading confidence. Alignment with clean cooking and decarbonization agendas builds policy credibility and long-term relevance.

LPG may once have been treated as a byproduct of hydrocarbons, but in the Global South it is emerging as a critical energy vector. With global supply now surpassing 370 million tons and competition intensifying, the advantage will go to producers who invest, integrate and inspire trust.

By embracing this vision, Middle East producers can secure not only export volumes but enduring relevance, while helping millions gain access to cleaner and safer energy. ■

Top 5 Recommendations

1. Create Anchor Demand through Producer-Led Investment Partnerships

Middle East LPG producers should establish anchor shorts by investing directly in large-scale import terminals and downstream infrastructure in high-demand regions, especially East and Southern Africa. Government-backed GTG (government-to-government) frameworks can mitigate political and regulatory risks, ensuring long-term offtake commitments that justify high CAPEX investments in storage and distribution.

2. Develop a Liquid and Transparent Pricing Benchmark

The dominance of the Saudi CP (Contract Price) model restricts market liquidity and hinders hedging. Producers must collaborate to introduce alternative, transparent regional benchmarks—potentially linked to FEI or Mont Belvieu indices—to enable forward hedging, enhance price discovery, and integrate more suppliers, traders, and buyers across the East-of-Suez markets.

3. Harmonize Regional LPG Specifications and Safety Standards

Disparate cylinder specifications and propane-butane mix ratios (e.g., 80/20 vs 20/80 blends) across African markets increase costs and inefficiency. Harmonizing technical standards—through regional bodies like the ECA (East African Community)—would enable bulk imports, simplify logistics, and foster intra-regional trade of LPG.

4. Strengthen National Regulation and Licensing to Ensure Market Discipline

Governments must implement unified LPG licensing, cylinder management systems, and anti-illegal-filling enforcement. Digitization and traceable refill networks (potentially blockchain-enabled) can improve safety and consumer trust, reduce market distortions, and safeguard investors against unregulated operators who undercut prices and compromise safety.

5. Foster Vertical Integration and Public-Private Collaboration

Encourage vertically integrated investment models—linking producers, shippers, and local distributors—to manage the full LPG value chain from production to end-user. Public-private partnerships can leverage state credibility with private sector efficiency, ensuring both energy access and commercial viability while facilitating the shift to clean cooking fuels across Africa.

In summary:

Securing and serving an international LPG market requires a coordinated producer-government strategy that combines anchor demand creation, transparent pricing, harmonized regulation, and integrated investment models. This integrated approach can unlock Africa’s vast LPG potential while enhancing Middle Eastern producers’ long-term competitiveness and resilience in global markets.

***LPG NATIONAL MARKET:
How Domestic LPG Systems
Can Deliver Energy Security
Without Subsidies***



How can national governments and producers ensure stable, affordable, and equitable access to LPG within domestic markets: UAE CASE STUDY?

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Securing a domestic LPG market begins with coordination, not competition, among national players. The UAE's system, built around ADNOC, ENOC, EMARAT, and SNF, shows how collective responsibility ensures seamless supply even in emergencies. Unified logistics, shared trucking fleets, and contingency planning allow gas to reach every Emirate regardless of crisis or climate event.

This collaboration underpins business continuity. Instead of parallel networks, integrated operators share storage depots, transport fleets, and safety protocols, avoiding duplication and enabling rapid disaster response. The result is not just efficiency but resilience: a national energy system that maintains stability amid volatility.

Transparency is another hallmark of success. In the UAE, LPG pricing remains market based and largely unsubsidized, ensuring healthy competition without distorting investment decisions. Marginal price variation across regions promotes fairness and fiscal discipline while incentivizing efficiency and innovation among suppliers. In short, open markets and collective responsibility can coexist when framed within a coherent national energy security policy.

Safety modernization is equally critical. Transitioning from legacy metal cylinders to advanced composite designs has reduced explosion risks and extended product life cycles. These lighter, corrosion resistant containers are safer to transport and easier to monitor, particularly in restaurants and households where visibility of gas levels matters. Technology has transformed what used to be a weak point in domestic distribution into a benchmark for safety and reliability.

Infrastructure, Innovation, and Policy Stability

Infrastructure is the backbone of national energy security. A domestic LPG market cannot thrive without the physical capacity to receive, store, and distribute product. Investments in modern terminals, truck loading racks, and regional depots ensure supply even during demand spikes or import interruptions. For new entrants, this principle is fundamental: build the foundation before expanding the footprint.

But infrastructure alone is not enough. Long term policy stability provides the confidence investors need to finance refineries, storage, and bottling plants that often take a decade to deliver returns. Frequent regulatory changes erode trust, while transparent multi year roadmaps allow both public and private stakeholders to plan investments aligned with national goals.

Integrated government oversight helps maintain quality and fairness across the system. Regulators must enforce unified safety standards and transparent auditing while allowing private distributors room to innovate. Clear governance protects consumers and investors alike.

Domestic refining capacity also plays a decisive role. Regions without refineries, such as Fujairah, face higher import costs and exposure to supply shocks. Linking refining, bottling, and distribution within one ecosystem reduces risk and keeps household energy affordable.

Equally vital are logistics. Well maintained roads, efficient ports, and modern transport fleets determine how safely and cost effectively LPG reaches end users. Every broken road or outdated port terminal adds risk and cost to the value chain. Investing in these assets strengthens both the economy and national resilience.

Security and maintenance must be prioritized alongside expansion. Pipelines and depots should incorporate modern surveillance, drones, and AI monitoring to prevent leaks, theft, or sabotage. Preventive maintenance and rapid response teams turn infrastructure from a potential liability into a national asset.

Innovation sustains this progress. Encouraging R&D in digital metering, composite materials, and smart valves can create new efficiencies, improve safety, and build domestic technical capability. Governments that support startups and university industry partnerships turn the LPG sector into a test bed for advanced engineering and sustainability solutions.

Inclusive Growth and Governance for a Secure Market

Infrastructure and innovation mean little without good governance. Corruption, political turnover, or inconsistent regulation can undo decades of progress. Transparent procurement processes, independent audits, and stable leadership attract foreign capital while ensuring that every dirham or dollar invested actually strengthens capacity on the ground.

Financial partnerships can share the burden of infrastructure development. Public private models allow governments to provide land, guarantees, or concessional finance, while private companies manage operations and risk. This balance accelerates modernization of bottling plants and transport fleets, transforming LPG from a commodity into a national service.

Subsidy reform must be gradual and targeted. Mature economies can phase out subsidies, but emerging ones need mechanisms that protect low income households without distorting markets. Smart card systems or digital vouchers can make LPG affordable while maintaining fiscal health. Over time, these reforms cultivate a financially sustainable energy market.

Affordability also depends on consumer purchasing power. Pay as you go metering, micro cylinder programs, and mobile payments bring clean cooking to millions who would otherwise rely on biomass. These inclusive financial models reduce indoor pollution, improve health, and align with global sustainability goals.

Professionalizing the workforce underpins every reform. Trained and certified drivers, technicians, and installers ensure consistent service and safety. Partnerships between technical colleges and energy companies can produce a skilled labor pipeline, fostering national employment and operational excellence.

Ultimately, securing a domestic LPG market requires embedding it within a broader national energy resilience strategy. Integrating LPG with renewables, CNG, and future hydrogen solutions creates flexibility

and reduces exposure to any single source. This diversified approach future proofs energy security while supporting global decarbonization commitments.

Conclusion: From Energy Access to Energy Assurance

Building a secure domestic LPG market is not just about distribution; it is about trust, foresight, and inclusion. The UAE's experience illustrates how transparent pricing, unified safety standards, and coordinated logistics create a stable, investor friendly, and consumer safe ecosystem.

Every country aspiring to strengthen its domestic market must align policy, infrastructure, and governance. The path forward lies in balancing open market principles with social equity, replacing fragmentation with unity, and transforming LPG from a product of convenience into an instrument of national resilience.

The lesson is clear: energy security begins at home, with the systems, institutions, and people who keep the flame burning safely, affordably, and sustainably from port to plate. ■

Top 5 Recommendations

1. Establish Unified National Standards for Infrastructure and Safety

Standardizing infrastructure, facilities, and safety protocols across the supply chain from midstream loading to downstream distribution is essential. Countries should adopt unified national codes for cylinder specifications, pressure standards, and pipeline safety to prevent fragmentation and accidents, ensuring seamless distribution and interoperability across regions.

2. Ensure Government Policy Stability and Long Term Regulatory Vision

Stable and transparent policies are critical for investor confidence and infrastructure development. Governments must institutionalize energy frameworks that survive political transitions, ensuring continuity in pricing, subsidies, and supply governance. Policy consistency builds trust and sustains domestic energy security even amid political change.

3. Expand Business Continuity Partnerships Among National Distributors

Coordinated partnerships among domestic LPG distributors are key to ensuring uninterrupted supply. Joint contingency planning and shared storage infrastructure guarantee national coverage during disruptions such as floods or disasters, ensuring resilience and equitable service delivery.

4. Modernize Consumer Infrastructure with Composite Cylinders and Smart Safety Systems

Replacing outdated metal cylinders with composite, transparent, and corrosion resistant alternatives enhances safety and consumer confidence. These lighter cylinders reduce explosion risks and allow users to monitor gas levels visually, improving efficiency and household safety. Gradual nationwide replacement programs can raise safety standards while maintaining affordability.

5. Mobilize International Financing to Support Domestic Subsidy Gaps

Many developing economies lack fiscal space to subsidize LPG for low income consumers. Governments should leverage international financial institutions and climate linked funding to bridge affordability gaps. Blended finance models can support infrastructure expansion, stabilize domestic pricing, and encourage equitable access without overwhelming national budgets.

In summary:

Securing and serving domestic LPG markets requires unified standards, regulatory stability, cooperative national logistics, modernized consumer infrastructure, and innovative financing partnerships — a five point framework that ensures safe, affordable, and resilient national LPG delivery systems.

POLICY BRIEF – TOP 20 ACTIONABLE RECOMMENDATIONS On How to Overcome the Risks and Secure the Opportunities from the Growing East-of-Suez LPG Market for the Global South

EXECUTIVE SUMMARY

Two billion people in the Global South remain exposed to household air pollution from cooking with solid fuels. Liquefied Petroleum Gas (LPG) offers an immediately deployable solution, affordable, scalable, and transformative for public health and the environment. Yet, access remains uneven due to infrastructure deficits, policy uncertainty, and limited financing. This Brief outlines 20 actionable recommendations to unlock the full potential of LPG as a clean-cooking and industrial growth catalyst across East-of-Suez markets. Organized under four strategic pillars—Infrastructure, Finance, Policy, and Social Impact—these recommendations provide a roadmap to convert risk into opportunity and deliver inclusive growth for billions.

I. INFRASTRUCTURE — Building the Backbone of Access

1. Build Anchor Infrastructure Across Africa and South Asia

Establish large-scale import terminals and storage hubs in growth markets such as Kenya, Ghana, and Bangladesh. Robust coastal and inland logistics reduce freight volatility, stabilize supply, and create a platform for clean-cooking access and industrial development.

2. Position the Middle East as an Integrated Market Partner

Gulf producers, including the UAE, Qatar, and Saudi Arabia, should co-invest in downstream infrastructure across Asia and Africa. Integrated supply chains secure offtake, stabilize freight economics, and sustain long-term demand growth across the Global South.

3. Develop Regional Cross-Border LPG Corridors

Establish interconnected maritime and overland corridors linking Fujairah, the Red Sea, East Africa, and South Asia. Redundant supply routes bypass chokepoints such as Hormuz and Bab el-Mandeb, strengthening resilience and regional energy cooperation.

4. Integrate Shipping Expansion with Storage Planning

With over 150 new VLGCs entering service by 2027, port and storage expansion must advance in tandem. Enhanced berthing, dredging, and scheduling coordination will maintain cost efficiency and secure reliable deliveries amid tightening global shipping markets.

5. Invest in Road, Port, and Pipeline Connectivity

Upgrading inland logistics networks ensures imported LPG reaches both rural and urban centers efficiently. Investment in intermodal connectivity—road, rail, and pipeline—translates physical supply capacity into actual consumer access and regional trade resilience.

6. Expand Cylinder Manufacturing and Recycling Capacity

Develop domestic manufacturing for cylinders, regulators, and valves to reduce import dependence, enhance safety, and generate jobs. Incentivize innovation in composite materials and recycling to improve affordability, extend product life, and build local industrial ecosystems.

II. FINANCE — Mobilizing Capital for Inclusive Growth

7. Mobilize Blended Finance and Multilateral Support

Combine concessional finance from DFIs with sovereign guarantees and private equity to de-risk investment. Climate-aligned blended finance unlocks capital while keeping LPG affordable, meeting both poverty-reduction and energy-security goals.

8. Build Regional Trading and Pricing Benchmarks

Establish transparent regional pricing indices tied to FEI or Mt. Belvieu benchmarks. Improved price discovery enhances hedging, market liquidity, and investor confidence—reducing volatility and aligning pricing with regional demand dynamics.

9. Strengthen Public-Private Partnerships

Forge PPPs that blend government oversight with private efficiency. Sovereign-backed offtake contracts improve project bankability and attract long-term capital into terminals, distribution networks, and storage facilities across developing markets.

10. Anchor Growth in Industrial and Petrochemical Demand

Link household clean-cooking expansion to industrial LPG use in petrochemicals and manufacturing. Stable industrial consumption, anchored by Asia's PDH capacity, underwrites long-term demand and reinforces the economic viability of social LPG programs.

“Anchored by Middle Eastern supply leadership and strengthened by regional partnerships, the East-of-Suez market can transform a humanitarian necessity into a catalyst for sustainable, inclusive development.”

11. Build National Strategic Reserves

Mandate storage equivalent to 15–20 days of national demand to cushion against freight disruptions. Modeled after India's 17-day system, strategic reserves safeguard energy security and stabilize domestic pricing during global volatility.

III. POLICY — Creating the Enabling Environment

12. Implement Stable and Predictable Policy Frameworks

Governments must maintain consistency in subsidies, taxation, and safety regulation to attract private capital. Clear multi-year frameworks prevent market distortion, ensuring investment confidence and affordability for low-income consumers.

13. Embed Digitalization Across the Supply Chain

Integrate GPS tracking, blockchain verification, and smart metering to enhance transparency and safety. Digital tools minimize theft, optimize subsidies, and ensure data integrity across production, transport, and end-user levels.

14. Develop Data-Driven Market Intelligence Platforms

Establish regional LPG observatories to collect and publish real-time data on supply, pricing, and consumption. Transparent analytics improve policy calibration, strengthen investor trust, and enhance coordination among regional governments and producers.

15. Promote South-South Cooperation

Encourage exchange programs between mature LPG adopters such as India and Indonesia and emerging African nations. Knowledge sharing on subsidy reform, logistics, and public communication accelerates rollout and fosters regional self-reliance.

16. Invest in Workforce Training and Certification

Develop national certification programs for safe LPG handling and logistics. Skilled local technicians and drivers enhance safety, reduce operational risks, and ensure long-term sustainability of national LPG ecosystems.

IV. SOCIAL IMPACT — Making Access Inclusive and Equitable

17. Leverage LPG as a Clean-Cooking and Climate Solution

Reframe LPG within global sustainability and public-health narratives. Quantify its role in reducing indoor air pollution, deforestation, and black-carbon emissions to access ESG financing and build political momentum for inclusive adoption.

18. Prioritize Last-Mile Delivery and Pay-As-You-Go Models

Deploy mobile refill vans, cooperative networks, and digital PAYG systems linked to mobile money. These models lower entry barriers for poor households, empower women, and ensure physical access converts into consistent usage.

19. Integrate ESG and Gender Metrics

Embed measurable indicators, such as air-pollution reduction, women's time savings, emission avoidance, into all LPG project reporting. Transparent social and environmental metrics attract sustainability investors and ensure projects deliver tangible public-health and equality benefits.

20. Execute with Regional Discipline and Partnership

Achieving universal LPG access demands synchronized action among producers, financiers, governments, and civil society. A regionally disciplined approach transforms fragmented initiatives into an integrated clean-energy ecosystem powering inclusive, low-carbon growth.

CONCLUSION

If implemented collectively, these 20 recommendations would redefine LPG as a cornerstone of clean-cooking access and industrial growth for the Global South. Anchored by Middle Eastern supply leadership and strengthened by regional partnerships, the East-of-Suez market can transform a humanitarian necessity into a catalyst for sustainable, inclusive development. ■

Source: Insights were harvested from a workshop hosted by ENOC at the 13th Fujairah Energy Markets Forum on Oct. 1st, 2025, where 100 LPG market stakeholders participated in a 3-hour curated brainstorming session

