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

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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.

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

