Gas Strategies

September 2025

Viewpoint

FLNG is redefining gas monetisation

The barriers to entry have been lowered yet again

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Gas Strategies' Viewpoints bring you insights based on deep experience supporting clients accelerate their ability to reimagine their entire value chains. In a world where speed is a competitive advantage, we help clients navigate complexity and capture opportunities across the ever-evolving energy landscape.

Gas Strategies

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Gas Strategies accelerates your ability to build physical and commercial value chains that drive real value, faster.

In a world where speed is a competitive advantage, we accelerate your ability to design, build and finance complex physical and commercial value chains.

We are an energy industry consultancy with an injection of high-end energy experience, and an instinct for action that drives results. Our people have sat in your chair, faced your issues. We translate those years in industry into clear-eyed direction that stops complexity slowing you down and turns process into progress.

From our beginnings in the complex worlds of gas and LNG, we have grown to partner clients across every energy type and drive more value from their value chains.

Accelerate your ability to deliver, with Gas Strategies on your team.

Executive summary

- **FLNG lowers barriers to entry to the LNG industry by reducing costs, offering a different risk profile, and enabling innovative business models.**

- **If you are an upstream resource holder, this is a new gas monetisation pathway that gives you access to global LNG markets.**

- **Even with this new pathway, as existing developers or new entrants you must still overcome key challenges to successfully develop LNG projects:**

- Build a robust gas value chain in which the diverse operational, financial and commercial considerations are integrated and aligned with all stakeholder interests

- Aggregate the most cost-competitive gas resources

- Establish credibility with offtakers by developing a comprehensive marketing strategy, building a strong narrative and securing optimal partners

A step-change in LNG

FLNG is a commercial enabler and a platform for a new generation of LNG participants.

The last decade saw the US, once expected to become the world's largest LNG importer, emerge as the leading LNG exporter. This turn-around was driven by technological innovation that unlocked previously economically stranded shale gas and lowered barriers to entry across both the upstream and midstream. In turn, a new LNG business model developed on the US Gulf Coast: one that enabled new infrastructure players to link abundant, low-cost supply to the international market at lower cost and with far greater flexibility than previously thought possible.

Lowering barriers to entry

At Gas Strategies, we believe FLNG is the next major step change in the evolution of the LNG industry. As we explored in our recently published Perspective, FLNG is increasingly becoming a simpler, scalable, and lower cost solution. With 15 units sanctioned to date and a spate of pre-FID projects upcoming, FLNG is no longer viewed as the technical option of last resort. It is becoming mainstream, and its benefits apply equally to onshore and offshore resources.

As the FLNG industry matures, we are seeing the technology offer competitive costs, alternative risk profiles and new business models. There is no longer a strong economic rationale for you to favour land-based terminals over floating liquefaction.

All future liquefaction projects must consider FLNG solutions.

Cost competitive solution

Public data indicates that FLNG can reduce your liquefaction Capex on a dollar per tonne basis compared to traditional greenfield onshore facilities. For example, Golar LNG stated that the MKII conversion of the Fuji vessel would require capital expenditure estimated at US$620[1] million per Mtpa. By contrast, Woodside Energy recently reported costs for the newly sanctioned onshore Louisiana LNG project at US$960 million[2] per Mtpa, more than 50% higher than the FLNG figure cited by Golar. While it is always difficult to achieve a like-for-like comparison, the magnitude of that difference in headline figures cannot be ignored.

Several core factors underpin FLNG's lower capital intensity. These include efficient shipyard-based supply chains and construction practices underpinned by competitive labour costs (especially in Chinese yards); the standardisation of vessel designs and associated learning curve; and the potential to avoid expensive onshore site preparation and civil works. In suitable metocean conditions, FLNG projects can even be developed without jetties or breakwaters, further cutting costs. Together, these factors are positioning FLNG as a more capital-efficient and flexible entry point into LNG production.

1 Golar LNG First Quarter 2025 Results & Update Investor Presentation, May 27th, 2025 2 Woodside Energy announcement letter of Louisiana LNG FID Decision, April 29th, 2025

A different risk profile

FLNG challenges traditional perceptions of risk across the liquification project life cycle compared to onshore liquefaction, which in many cases may be more attractive to financiers and project developers.

During construction, FLNG benefits from a controlled shipyard environment with readily available skilled labour. In contrast, onshore projects require the establishment of new supply chains and the mobilisation of specialist labour in often challenging environments. FLNG can also avoid many of the physical, legal, security, and regulatory risks associated with onshore sites. This contrast is clear in Mozambique. The onshore Mozambique LNG project has been significantly delayed due to security concerns, while the Coral Sul FLNG was able to commence operations without delays. Likewise, the recent doubling of Woodfibre LNG's capital costs (driven by permit delays, building code changes, the need for a second floating accommodation vessel and challenging on-site conditions) illustrates construction project risks that can be reduced or completely avoided with an FLNG approach.

The greatest commercial risks for an operating LNG project generally stem from external disruptions. That could be security breakdowns, feed gas constraints or shifts in market dynamics. In these cases, floating offshore facilities are less likely to be impacted. They can even be repositioned where an onshore plant is physically and financially stranded.

As energy industry consultants active in FLNG, we have witnessed first-hand the shift in risk perception of these projects through our work with lenders on project financing. A decade ago, lenders were cautious about FLNG's technical risks. Today, they generally view FLNG in the same light as onshore facilities, and appreciate the added advantage of potential redeployment. As we highlighted in our recent Perspective piece, there is now precedent for FLNG relocation which will likely reinforce lenders' confidence. This evolution in market perception is becoming a key factor in lowering the barriers to entry for new LNG participants.

Another example of FLNG's evolving risk profile and these changing industry perceptions can be seen in the projects under development by YPF, Argentina's leading oil and gas producer. YPF is currently developing two FLNG projects for a total of 22 Mtpa in partnership with two major IOCs, Shell and ENI. This demonstrates the willingness and confidence of established players to develop large-scale floating projects with a relative newcomer to the LNG industry.

New business models

FLNG enables new business models that offer you more flexible and accessible financing and ownership structures.

If as a developer you choose to own a vessel, you can benefit from lower capital intensity. And if you choose instead to charter a vessel, that reshapes your project's Capex profile entirely. Simply put, companies that may not have a strong enough balance sheet or sufficient credit rating to access traditional project financing are now able to play in LNG. Most crucially, FLNG can deliver gas liquefaction as a service, reducing the need for significant in-house technical expertise or midstream operating experience. The modern FLNG industry allows you as a resource holder to focus on monetising your gas without needing to manage complex infrastructure. In effect, FLNG has become a near plug-and-play solution: an off the shelf entry into LNG.

One of the clearest advantages of FLNG over onshore terminals is speed. Both newbuild FLNG units and conversions of existing vessels can now be completed more quickly than constructing an onshore facility.

Beyond construction, new business models such as those pioneered by Golar LNG allow projects to charter an existing FLNG unit and deploy it in a radically shorter timeframe than any other LNG solution.

A prime example of the impact of these new business models is the Southern Energy S.A. (SESA) project in Argentina. By chartering Golar's Hilli vessel, SESA's Phase 1, which took FID in May 2025, expects to achieve COD by 2027. That is just two years from FID to COD. No onshore terminal could match that speed to market. What is more, the company's adoption of this new business model meant it did not need project finance to take FID.

FLNG unlocks access to the global gas market for a wider range of LNG market participants. It should be considered as a mature, viable option for any new gas monetisation opportunity. So, who's best placed to take advantage of what FLNG has to offer?

In spelling out the many advantages of FLNG, the message should not be misinterpreted. FLNG does indeed offer you a route to the global stage, but deploying a floating solution is far from straightforward. Success today hinges less on technical delivery and more on overcoming the commercial hurdles. These include finding the lowest cost feedgas, building robust value chains which distribute value and risk proportionately, and finding the right downstream markets.

We have supported clients on five FLNG engagements, two of which have now reached FID, and we are currently working alongside a client who has chosen FLNG as their preferred pathway to monetise an internationally significant gas resource. In a space where delays are common and project mortality is high, success depends on having the confidence and capability to manage complex stakeholder dynamics and assemble a value chain that is only ever as strong as its weakest link.

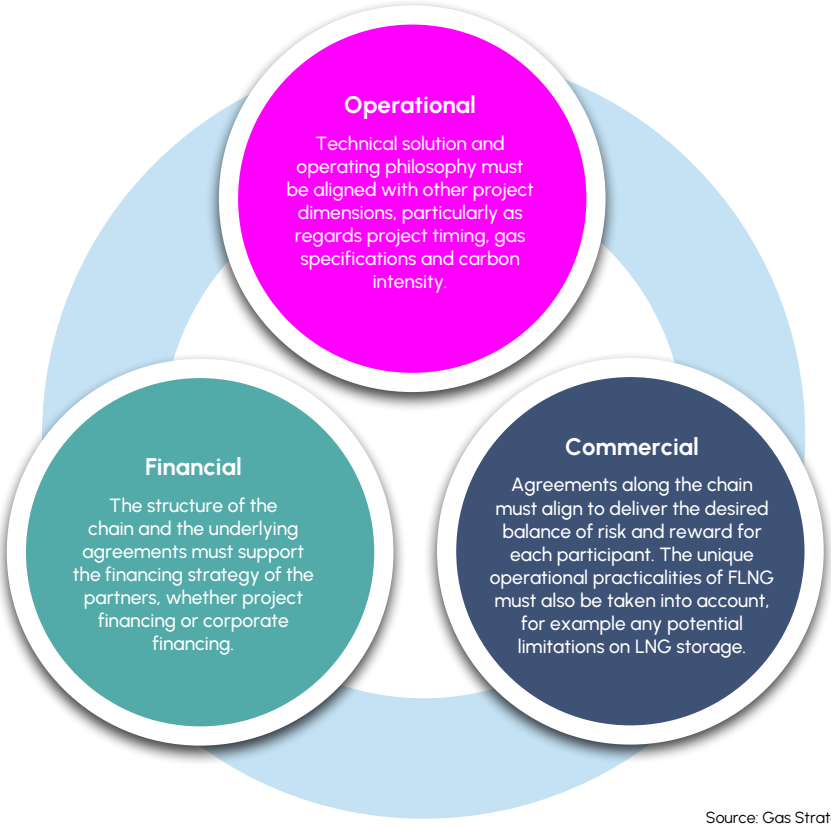
Turn an FLNG opportunity into a gas monetisation advantage

Multiple stakeholders, interests, commercial and political agendas, and projects for delivery must be aligned simultaneously to ensure success.

New players choosing an FLNG solution over an onshore one will find that FLNG addresses some of the challenges around liquefaction. To succeed, these players must still tackle many of the same core challenges faced by onshore projects. Top of this list is the need to build a robust gas value chain from the upstream resources all the way through to offtake. If choosing this route, critical to the future viability of your project will be ensuring that the entire chain functions as an integrated whole, rather than treating each element in isolation. The market (lenders, offtakers etc.) will look to verify its end-to-end integrity to give them confidence in the credibility and robustness of your project. This applies across all project dimensions.

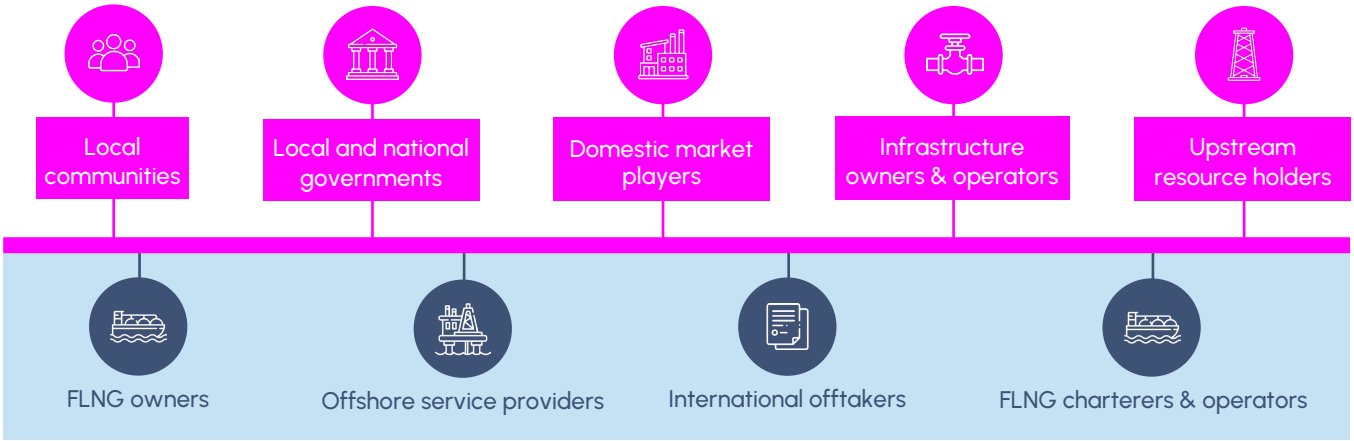
Project teams can be so focused on advancing individual workstreams that they often overlook the broader strategic opportunities that their project could deliver. Building a strong gas value chain goes far beyond

Figure 1: **FLNG project dimensions**



Source: Gas Strategies

Figure 2: **Potential stakeholders in a FLNG project**



Source: Gas Strategies

securing the right commercial agreements. It requires aligning the agendas and priorities of all stakeholders, extending beyond project partners to include regulators and authorities. Given the significant economic impact of an LNG export project, it is equally important to ensure that the project's objectives are aligned with the political priorities of both local and national governments.

For a project to gain the necessary credibility with all stakeholders it needs to bring diverse interests together into a coherent whole, creating an integrated value chain that maximises value and minimises delivery risk for everyone involved.

Consolidating the optimal upstream resources

All successful LNG projects begin with a competitive upstream gas resource, and FLNG is no exception.

If you are a new entrant who already holds upstream resources, the challenge lies in aggregating a gas supply that is both cost competitive and sufficiently large to justify the investment. Thanks to FLNG's redeployment potential, the required resource base can be smaller than you would need for an onshore terminal. However, LNG supply arrangements demand a very different approach from domestic gas contracts. You need the flexibility to adapt to LNG production realities and align your entire value chain. In our work alongside resource holders pursuing FLNG as their route to market, we have seen first-hand the importance of leveraging the most cost-effective options and designing supply agreements that will underpin the economic resilience of the project.

Creating confidence with offtakers

Securing offtake agreements is one of the most decisive steps for any new entrant. Projects that charter FLNG vessels with minimal or no project financing benefit from greater flexibility in contract lengths and can attract a broader range of potential offtakers. In contrast, projects that own the FLNG vessels and rely on project financing must secure long-term commitments from creditworthy buyers. In either case, as a new entrant you must present a credible and compelling project to the market to instil confidence in potential offtakers.

What the market values most is a coherent story: secure upstream supply; well-structured agreements; alignment with host-country priorities; and a clear timeline for delivery. Without this story, even promising projects can struggle to attract serious counterparties. With it, projects gain credibility and the ability to negotiate with experienced offtakers on equal terms. A powerful strategy and narrative are vital to build confidence and unlock offtake agreements that ultimately determine your project's viability.

At Gas Strategies, we accelerate our clients' learning journeys, helping them gain the confidence they need to navigate complex negotiations with major IOCs and experienced offtakers. It takes years of experience to be able to identify the most suitable marketing strategy and partnerships. Our collaborative approach sees us share that experience to tackle some of the most complex challenges in your LNG value chain and bring your FLNG ambitions to life.

Connect the dots for a successful FLNG project

Why would anyone consider building an onshore terminal again?

FLNG is no longer a crazed science experiment. It is a proven, scalable, and increasingly preferred pathway to bring new gas resources to market. It reduces capital intensity, shortens delivery timelines and offers a risk profile that is often more attractive to both financiers and developers. Just as importantly, FLNG opens the LNG sector to new entrants. It allows for flexible business models and lowers the barriers that once kept all but the largest players out of the game.

Yet success is far from guaranteed. Taking an outside-the-box approach to connect the dots across the value chain and navigate negotiations with experienced players can be daunting.

With FLNG reshaping the economics and accessibility of LNG, the question for the industry is no longer whether floating solutions work, but: Why would anyone consider building an onshore terminal again?

We work side-by-side with clients as a force multiplier. We accelerate your learning curve and provide innovative ways to align stakeholders' agendas and shape strategies that turn opportunity into practical reality.

Gas Strategies

Accelerate your ability to deliver, with Gas Strategies on your team

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