

LNG Outlook 2025

Confronting peak demand

A new chapter for LNG in the rapidly
accelerating energy transition

Introduction

As the LNG industry confronts the potential of peak demand, fuelled by the accelerating energy transition and the growing influence of net-zero policies, uncertainty looms large.

Navigating this complex landscape requires a deep understanding of market dynamics, innovative solutions, and a proactive approach to risk management.

This uncertainty is further heightened by the unprecedented events of the past five years, characterised by the deeply felt impacts of the Covid-19 pandemic, war in Ukraine, escalating geopolitical volatility, and the accelerating energy transition.

These events have demonstrated the unpredictability of the global energy market.

The next five to 15 years will undoubtedly bring more unforeseen challenges – but also opportunities.

The following LNG Outlook, which forms part of Gas Strategies' Transformative Thinking, provides a comprehensive analysis of these key trends and their implications for the LNG industry.



LNG Outlook 2025

Confronting peak demand

Once a bastion of stability and predictability, the LNG industry is now confronted by a defining moment: the looming prospect of peak demand.

This paradigm shift, driven by the accelerating energy transition and fluid geopolitics, is forcing players to re-evaluate their strategies and adapt to a rapidly changing market.

The rise of portfolio players and broader access to LNG supply have fundamentally transformed the market, creating a more competitive and complex business.

However, as the industry evolves, the needs of customers, particularly in South and South-east Asia's ascending markets, are taking centre stage.

Companies now need to prioritise customer satisfaction and proactively adapt to shifting market forces, while navigating the complexities of a potentially declining LNG demand trajectory.

A looming reality for LNG

The concept of peak LNG demand, although relatively new, is now gaining prominence.

Significantly, the projected timeline for peak LNG has been progressively brought forward since the wave of net-zero policy announcements began in late 2020. →

- Timeline for peak LNG demand potentially brought forward due to accelerating energy transition and growing influence of net-zero policies
- Emergence of portfolio players has transformed the market, increasing competition, but carries risk of overcommitment and financial losses
- Asia will drive LNG demand; understanding and adapting to the diverse region's evolving needs and geopolitics will be crucial for industry players
- Success in next chapter of LNG market requires a multifaceted approach, including embracing innovative pricing structures and technologies



"The window for new LNG supply projects to come online and meet future demand is quickly narrowing."

Gas Strategies' own analysis recently revised the projected peak LNG demand to ~722 mt around 2039 – an earlier timeline and lower volume than our previous projection of ~745 mt around 2040.

This revision reflects the industry's profound transformation, fuelled by factors such as the accelerating energy transition amidst the growing influence of net-zero policies.

As the world transitions towards a low-carbon future, the demand for cleaner energy alternatives is impacting LNG demand, whose substantial growth in the past decade led many to believe that this expansion would continue unabated.

The swift rise of renewable energy sources, particularly in Europe, China, and other developed economies, and the emergence of alternative and potentially more cost-effective energy sources, are converging to not only raise the possibility of peak LNG demand, but also bring it closer.

With that in mind, 2025 and 2026 are crucial years for LNG supply projects that have yet to reach final investment decision (FID).

Given the four- to six-year construction timeline for a

new liquefaction facility, the window for new projects to come online and meet future demand is quickly narrowing.

This underscores the urgency for LNG projects to secure timely approvals and expedite construction to capitalise on the remaining window of opportunity.

The rise of the portfolio player

As the industry confronts the prospect of peak LNG, market dynamics are undergoing significant changes.

A key factor in this is the rise of the portfolio players.

In 2013, GIIGNL listed seven companies as portfolio holders, but only three – BG, Eni, and Shell – held more than one contract.

A decade later, of the 118 mtpa of LNG sales and purchase agreements (SPAs) agreed between the beginning of 2023 and September 2024, global LNG portfolios accounted for 17% of the sell-side and 42% of the buy-side.

This made them the third most active seller, behind only US and Qatari projects, and the world's most active buyer – nearly four times larger than their nearest competitors, India and China.

Portfolio perils

The rapid rise of portfolio players, while enhancing market flexibility, also carries significant risks. A major concern is the potential for overcommitment.

By taking on long-term contracts to secure supply, these companies risk being saddled with excess volumes they struggle to offload, especially in volatile market periods.

This can lead to substantial financial losses and reputational damage.

Ultimately, the ability of portfolio players to successfully address these issues hinges on their strategic foresight, effective risk management, and swift adaptation to changing market conditions.

Companies that fail to do so may face severe consequences, including financial losses, asset impairments, and even corporate restructuring.

This dramatic increase in both the number and scale of portfolio players demonstrates their growing influence on the LNG market.

Meanwhile, competition in the portfolio arena is intensifying.

State-owned companies like QatarEnergy and ADNOC, leveraging their geopolitical weight, are positioning themselves as major portfolio players.

Additionally, China's role as a quasi-portfolio player adds yet another powerful force into the mix.

The rise of the portfolio players has led to concerns about the concentration of market power.

While portfolio players offer flexibility and efficiency, their aggregate market power could, however, lead to reduced competition, potential for price manipulation, and limited buyer choice.

This could lead to higher prices for consumers and stifle innovation.

Enter the underdogs

Against this backdrop, a new breed of smaller portfolio players has emerged.

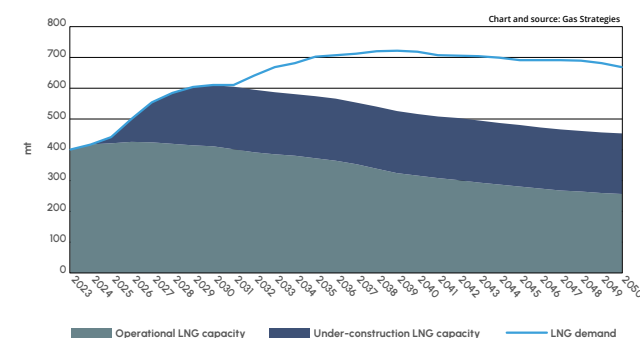
These companies, lacking the scale and resources of the giants, are differentiating themselves by focusing on niche markets or developing unique technologies.

Among them, New Fortress Energy (NFE), despite recent challenges and restructuring efforts, has pioneered the Fast LNG concept, prioritising speed to market.

For its part, Delfin LNG's modular approach has the potential for future expansion through the addition of more floating LNG (FLNG) vessels – although the project has yet to reach FID.

Venture Global, with its modular designs and extended commissioning period, has adapted to the evolving market dynamics. But this approach, which has effectively prioritised spot market sales due to technical reasons preventing the commencement of long-term contracts, has led to legal disputes with several energy majors.

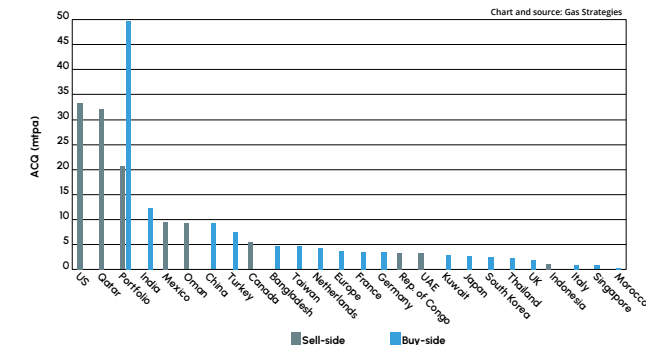
Gas Strategies' central case scenario anticipates an LNG peak of 722 mt in 2039



In the decade from 2014, LNG has shown continuous growth, averaging +5.3% annually, while other fossil fuels saw periods of decline



LNG SPAs announced from the start of 2023 to September 2024 show that global LNG portfolios accounted for 17% of the sell-side and 42% of the buy-side



Asia powers future growth

Asia, especially developing economies in South and South-east Asia, will continue to dominate the global LNG market.

Consuming 65% of the world's LNG supplies in 2023, Asia's diverse and evolving needs will significantly shape the future of the industry.

While demand in the mature markets of Europe and Japan may plateau or even decline, growth in price-sensitive South and South-east Asia will be crucial.

Gas Strategies' analysis suggests that LNG demand in China, Japan, South Korea, Taiwan, South Asia, and South-east Asia will hit a collective 443 mt by 2030 – 76% of the world total.

South-east Asia's LNG demand could surpass 100 mt by 2034, just behind Europe's 111 mt.

China's meteoric rise as a leading LNG buyer saw it surpass stalwart importers Japan and South Korea in under two decades.



Chinese LNG demand, which stood at 71 mt in 2023, is likely to continue growing until it peaks at 115 mt in 2032.

Driven by factors such as declining indigenous gas reserves and increasing energy demand, these regions will increasingly rely on LNG imports to meet their energy needs.

Addressing the challenges

The capital-intensive nature of LNG projects, with their long lead times and substantial upfront investments, creates a high-stakes environment for companies.

Many firms face pressure to expand their portfolios and secure long-term contracts, often cutting into profit margins.

While large players drive economies of scale and can invest in research and development, their increasing dominance can also limit opportunities for smaller firms.

As giants such as Shell, BP, and TotalEnergies consolidate market power, traditional long-term contracts are giving way to more flexible arrangements, which can be difficult for these smaller players to emulate.

To mitigate capital costs, developers may opt for smaller, modular liquefaction trains or employ FLNG units.

Existing LNG projects can benefit from expanding or debottlenecking, leveraging economies of scale and shared infrastructure.

Innovative pricing structures can help balance the need to reduce debt exposure with customers' desire for flexibility.

Furthermore, demonstrating a commitment to reducing methane emissions and implementing carbon capture and storage (CCS) solutions can bolster LNG's position as a transition fuel.

"A decade on since the Paris Agreement was adopted, the significant global shift towards renewable energy sources is fundamentally shaping the long-term outlook for fossil fuels."

This creates opportunities for agile portfolio players who can manage supply risks and offer highly desired flexible solutions to buyers.

However, the growing demand for energy in these markets also poses significant challenges.

The continued reliance on coal-fired power in many parts of South and South-east Asia remains a major obstacle to achieving their climate goals and could undermine the long-term growth of LNG demand.

'Dark doldrums'

2025 marks 10 years since the adoption of the landmark Paris Agreement which set the goal of limiting global temperature rise to below 2 degrees Celsius, preferably to 1.5 degrees Celsius, above pre-industrial levels.

A decade on, the significant global shift towards renewable energy sources is fundamentally shaping the long-term outlook for fossil fuels, including natural gas and LNG.

As countries strive to reduce their carbon footprints, the demand for cleaner energy alternatives is impacting LNG demand.

At COP28 in Dubai in 2023, world leaders committed to transitioning away from fossil fuels and tripling global renewable energy capacity by 2030.

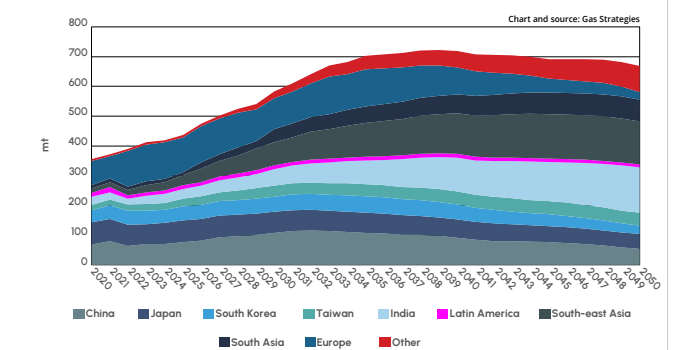
Despite the distraction of the US presidential election, COP29 last year was dominated by hard-fought climate finance negotiations.

Developing nations aimed for a USD 1.3 trillion annual pledge, but the final agreement in Baku fell short at USD 300 billion.

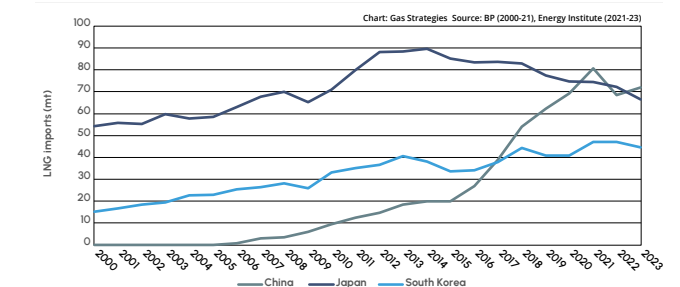
Nevertheless, a global consensus on carbon market standards was reached, which the UN said should boost finance for underprivileged countries.

But the intermittent nature of renewable energy sources necessitates flexible and reliable back-up options to ensure grid stability.

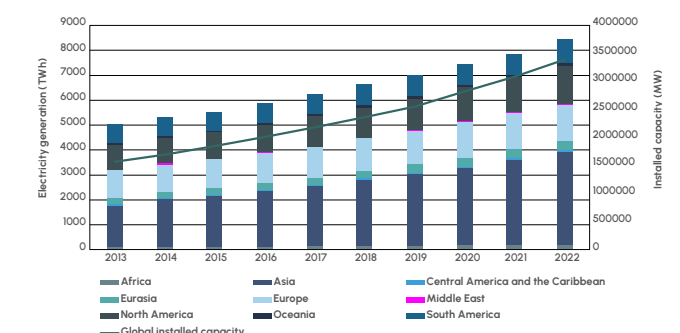
LNG demand in Asia's diverse LNG importing markets is projected to have a 76% share of the global total by 2030



China first surpassed Japan to become the world's top LNG importer in 2021, and again in 2023



Between 2013 and 2022, global renewable power generation grew 67.6%, while installed renewable capacity more than doubled



"China is prioritising energy security by increasing domestic production and diversifying its energy sources, which could impact US LNG exports."

Long periods of dark and windless days, known as the "Dunkelflaute" ("dark doldrums") in German, highlight the limitations of renewable energy sources.

The UK's overly ambitious plan to achieve a clean power system by 2030, heavily reliant on offshore wind and solar power, faces significant storage limitations, creating a risk of curtailments.

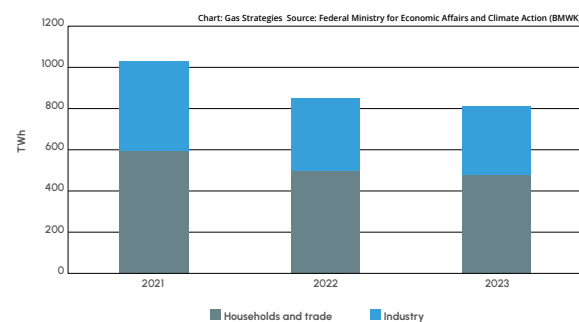
Preventing blackouts and industrial downturns is a crucial and politically sensitive issue for many major economies.

In Germany, a political backlash against the Olaf Scholz-led coalition's recent climate and energy policies caused its collapse, triggering a snap election.

LNG may in some cases play a role as a flexible fuel source to balance the grid and meet peak demand.

However, LNG's long-term viability depends on factors such as CCS technologies, hydrogen blending, the pace of renewable energy adoption, and government policies that support LNG exports and/or do not penalise LNG imports.

Germany's industrial sector significantly reduced natural gas consumption from 433 TWh in the year before Russia's invasion of Ukraine to 333 TWh in 2023 – a 23.1% decrease



Trump 2.0

Donald Trump has returned to the White House for a second term as US President.

The businessman-turned-politician has vowed to "drill, baby, drill" and, as promised on the campaign trail, he lifted the Joe Biden administration's pause on LNG export licences to non-Free Trade Agreement (non-FTA) countries on 20 January 2025: his first day of taking office.

US legal experts had said it would be wiser for the new administration to wait until the public comments period for the Biden administration's LNG study, which urges caution on increasing US LNG exports, ends on 20 March 2025.

While not explicitly opposing LNG exports, the study, released on 17 December 2024, raised concerns about their sustainability.

US law mandates a thorough review process to determine if LNG exports are in the public interest, including a case-by-case analysis and addressing concerns raised in the Biden study.

Individual projects will require careful scrutiny, and any attempt by Trump to circumvent the process could leave LNG approvals exposed to lengthy legal challenges from opponents and potentially deter lenders from financing projects.

Trump also aims for a swift Ukraine-Russia peace deal but faces challenges reconciling this with US LNG interests.

Easing sanctions on Moscow could benefit Russia's energy sector, particularly the Arctic LNG 2 project, which directly competes with prospective US LNG exports.

Trump's "America First" policy prioritises US LNG exports, creating tension with efforts to engage with Russia.



Nevertheless, even without sanctions against Russia, factors like oversupply and declining European demand could hinder Arctic LNG 2's success.

And while Trump may seek to ease sanctions, he is threatening Russia with more if it fails to negotiate on the war.

Finally, the ongoing US-China trade war has broader implications for the energy sector.

The trade war has slowed economic growth in both countries, impacting energy demand.

Tariffs have disrupted energy trade, and the potential for "decoupling" between the two economies – with concerns over a "technological cold war" – raises concerns about supply chain disruptions and the development of new energy technologies.

In response, China is prioritising energy security by increasing domestic production and diversifying its energy sources, which could further impact US LNG exports.

A key market for future US LNG growth, China has already reduced imports of US LPG and crude oil.

If Trump imposes tariffs on Chinese goods, then Beijing could retaliate with tit-for-tat measures like it did in 2018.

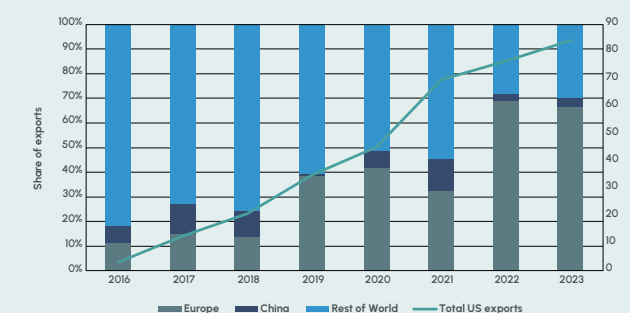
China imposed a 10% tariff on US LNG imports that year, which rose to 25% in 2019.

The US-China trade war could also increase steel prices, adding to the cost of building new US LNG facilities.

These interconnected challenges highlight the complexity of US energy policy in the current geopolitical climate.

For Trump, dealing with these challenges will require careful consideration of legal, economic, and geopolitical factors.

Since the start of US LNG exports from the Lower 48 states, China's highest import volume (9.1 mt) was in 2021, representing 13% of all US LNG exports that year



"Russia's invasion of Ukraine highlighted the vulnerability of historical energy supply chains and the need for energy security diversification."

Geopolitical considerations

Geopolitical tensions and considerations further complicate the LNG landscape and can profoundly impact buyer appetite.

Russia's invasion of Ukraine highlighted the vulnerability of historical energy supply chains and the need for greater energy security diversification.

In Germany, this led to an astonishing decline in gas demand, with total gas consumption falling from 91.7 Bcm in 2021 to 75.7 Bcm by 2023, and the subsequent contraction of the country's industrial base.

Industrial heavyweights like BASF, Volkswagen and Thyssenkrupp have reduced their output in Germany or warned of plant closures.

In a panic to replace Russian pipeline gas volumes, Europe expanded its regasification capacity from 184 mtpa at the end of 2021 to 235.7 mtpa by the end of 2023.

Germany, which had long resisted developing domestic LNG import capacity, greenlit regasification projects, and by the end of 2022 had received its first LNG cargo, becoming the EU's seventh biggest LNG importer in 2023.

At the same time, countries like Japan are increasingly demanding flexible supply contracts, allowing them to divert LNG cargoes to different destinations.

Elsewhere in Asia, established gas consumers like Bangladesh, Bahrain, the Philippines and Vietnam, each with diverse and evolving needs, are undergoing a complex transition to become LNG importers.

This transition, which usually involves replacing cheap domestic gas with "expensive" LNG, presents significant challenges.

As these nations adapt to a new way of procuring and consuming gas, they must carefully balance the



"Companies that can effectively balance economic viability, environmental sustainability, customer needs, and the test of peak LNG will emerge as industry leaders."



economic implications of higher gas costs with the benefits of enhanced energy security and supply diversification.

The accelerating energy transition, coupled with shifting geopolitical dynamics, has prompted governments to play a more decisive role in shaping energy supply chains, often clashing with the interests of buyers and suppliers.

This could potentially disrupt traditional energy sector business models and expose companies to heightened risks.

Addressing these geopolitical complexities requires a nuanced approach.

Companies must carefully assess and mitigate geopolitical risks in their investment decisions and operational strategies.

Proactive approach

The LNG industry stands at a pivotal juncture.

While the past decade has witnessed significant growth for LNG, driven by factors such as the rise of portfolio players and surging global demand, the industry now faces a period of profound transformation.

The looming prospect of peak LNG demand, coupled with the accelerating energy transition, geopolitical uncertainties, and the increasing dominance of large players, creates a dynamic and challenging environment.

Negotiating this environment requires a multifaceted approach.

Companies must prioritise customer satisfaction, quickly adapt to evolving market dynamics and proactively address the challenges posed by the energy transition, including the need to reduce emissions and bolster sustainability.

Embracing innovative technologies, such as modular liquefaction solutions, CCS, and hydrogen blending, will be crucial.

Furthermore, effectively mitigating geopolitical risks, including the rise of new suppliers and the amped-up involvement of governments, will be paramount for long-term success.

Those companies that can effectively balance economic viability, environmental sustainability, customer needs, and the test of peak LNG will emerge as industry leaders. ■



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