THE OFFICIAL LNG2026 SHOW DAILY

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Principal Sponsors ConocoPhillips

- Navigating the Next LNG Cycle
- LNG Trends in Developing Economies
- A Dual-Coast LNG Strategy
- Mapping the LNG Demand Response

Atlas Copco welcomes you to ***LNG 2026***

At Atlas Copco, we bring together decades of LNG experience, a strong global presence, and the flexibility to support projects across every stage of the natural gas value chain. From liquefaction and storage to transport and regasification, our compression and expansion technologies are designed to deliver reliable performance in the most demanding LNG environments.

Booth No. **9110** | 2nd - 5th February

Scan the QR code to know more.

Atlas Copco
Gas and Process

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LNG2026: General Information

Thank You to Our Sponsors

Welcome

As Chairman of the LNG2026 Programme Committee, it is my honour to welcome you to Doha and the 21st International LNG Conference & Exhibition. This international LNG series of events is the world's preeminent gathering dedicated solely to the LNG industry.

Since the previous event in 2023, the Programme Committee has been working diligently to deliver a Technical Programme that is unparalleled in its scope and timeliness.

The Committee, made up of 38 international LNG experts representing every aspect of the industry, have pored through a record number of submitted abstracts to bring you a programme that is both insightful and thought-provoking. The programme is composed of 13 formal paper sessions focused primarily on technical topics, five market and commercial based panel discussions, and the Discovery Hub, where more detailed and focused topics are presented in electronic format in a dedicated location on the Exhibition floor.

The LNG industry is more dynamic than ever and holds the promise to meet the world's growing demand for energy with a product that is affordable, sustainable and secure.

On behalf of the Programme Committee, we hope that you find the Technical Programme helps advance these worthy goals. •

Jim Soloman
Chairman
LNG2026 Programme Committee
Honeywell

Event Overview

Get ready for the first full day of conference sessions, packed with ideas, insight and interaction. The day kicks off with Plenary and Spotlight Sessions exploring key market trends, shifting investment dynamics and the importance of global collaboration.
From there, dive into the Technical Programme across the exhibition floor covering everything from engineering and operations to digitalisation and emissions reduction.
Throughout the day, the exhibition will be buzzing with global suppliers and technology providers, offering the perfect setting to spark conversations and make new connections. With plenty of breaks and dedicated networking spaces, Day 2 is all about learning from industry experts, discovering new opportunities and building meaningful relationships in a lively, engaging environment.
Make the most of every moment and we look forward to seeing you at the QNCC today.

REGISTRATION ONSITE AND BADGE PICK UP

Registration Opening Times:
Location 1: QNCC, Conference Side, Main Car Park Entrance
Location 2: QNCC, Exhibition Side, Hall 6 Registration Desk

2 February

Location 1	8:00 – 17:00
Location 2	12:00 – 17:00

3–4 February

Locations 1 and 2	8:00 – 17:00 daily

5 February

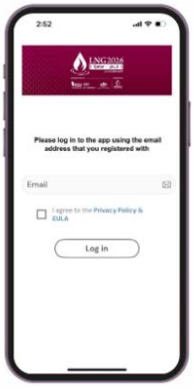
Locations 1 and 2	8:00 – 15:00

Every time an attendee enters LNG2026 they will be asked to present government issued photo ID. This can be a valid passport or a Qatar ID (QID) for residents. All attendees are required to wear their badge AT ALL TIMES during LNG2026, and this includes networking functions. Attendees will only be able to access the areas of the event included in their registration. •

LNG2026 Event App

The LNG2026 Event App, brought to you by Shell, will be an essential tool to help you navigate the event.
The Event App contains the programme for the week, speaker profiles, exhibition layout, exhibiting company profiles, details of networking functions and much more.

How to Download the Event App



Download the LNG2026 App

Download the LNG2026 Event App to your phone from Play Store or App Store, or use the QR code below:

Download on the App Store
GET IT ON Google Play

How to Access the Event App

1. Open the Event App and search for LNG2026
2. Log in using your email address you used to register for the event
3. To verify your account, you will need to enter a code sent to your email (please check your spam folder) or mobile.

Once Logged In

Depending on your registration type you will have access to different features e.g. floor plans, full programme, speaker profiles, exhibitor list as well as creating your own personalised schedule for the event.

Features Available to All Attendees:

- Event information
- LNG2026 Show Daily

Benefits for Conference Delegates:

- View attendee list
- Schedule meetings
- Manage your schedule
- View speaker profiles, papers, and posters

Event App Helpdesk

If you require help or advice with regards to the Event App, please speak to our staff at the Event App Support Desks located in the Spider Area, Level 1 and Exhibition Foyer, Ground Level or email support@allintheloop.com •

Tuesday's Programme

As the first full day of sessions gets underway today, here are a few we recommend, offering strategic insight, technical depth and practical perspectives from across the LNG value chain.

EXECUTIVE PROGRAMME: Plenary Sessions

Perspectives on Gas, Growth and Energy Security

Explore how LNG and natural gas support economic growth and energy security in emerging markets, as H.E. Masoud Suleman Mousa Mahmoud, Chairman of Libya's National Oil Corporation, joins Laurent Ruseckas of S&P Global Energy to discuss policy, investment, infrastructure and gas in national energy strategies.

9:00 I Conference Hall, Level 2

LNG: A Critical Enabler for a Lower-Carbon Future

As the global energy landscape continues to evolve, LNG stands at a critical juncture in addressing the energy trilemma delivering reliable, affordable and lower-carbon energy. This session brings together LNG industry leaders to explore key imperatives for the sector's continued relevance and growth.

9:30 I Conference Hall, Level 2

Achieving Success Together: Cultivating Strategic Partnerships in LNG

The LNG industry thrives on diverse partnerships from buyer-seller relationships to joint ventures and government collaborations. Our expert panel will explore how these partnerships are evolving to create long-term value, drive innovation, address industry challenges and adapt to shifting global energy demands.

13:00 I Conference Hall, Level 2

EXECUTIVE PROGRAMME: Spotlight Sessions

Seas of Change: LNG Shipping in an Evolving Energy Landscape

LNG shipping is undergoing major transformation. This panel will discuss regulatory pressures, demand-driven impacts on freight and trade, digitalisation and talent needs and how the sector can secure investor confidence for long-term growth.

10:45 I Auditorium 1

ESG Regulations: How do they Impact LNG Trade?

Evolving emissions and ESG regulations are impacting global LNG trade. Industry experts examine effects on LNG flows, risks of a two tier market, and potential consequences for gas and LNG supply security.

14:15 I Auditorium 1

TECHNICAL PROGRAMME: Paper Presentations and Panel Discussions on Commercial Topics

Increasing End Use Applications of LNG

Discover the key aspects advancing LNG as a safe and reliable maritime bunker fuel, road transport fuel and a fuel for next-generation high-efficiency, low-carbon-intensity floating power plants.

10:30 I Technical Programme Hall A

Shipping, Marine and Port Operations: Advances in Shipping and Port Operations

Shipping is a key part of the LNG value chain and constantly evolving. This session covers sustainable carrier design, operation, LNG bunkering, ship-to-ship transfers and port and terminal infrastructure.

14:00 I Technical Programme Hall A

Operations, Best Practices, Process Safety: Operational Efficiency, Optimisation and Emission Reduction

Learn how innovation and best practices are improving LNG plant performance, safety and emissions reduction, with insights from operating projects on efficiency, optimisation and asset integrity and management.

15:45 I Technical Programme Hall C

EXHIBITION HIGHLIGHTS

Explore cutting-edge technologies, live demonstrations and interactive displays. A glimpse of what's happening across the exhibition floor.

Exhibition Opening Hours

- **Tuesday 3 February 2026:** 9:00 – 17:00
- **Wednesday 4 February 2026:** 9:00 – 17:00
- **Thursday 5 February 2026:** 9:00 – 15:00

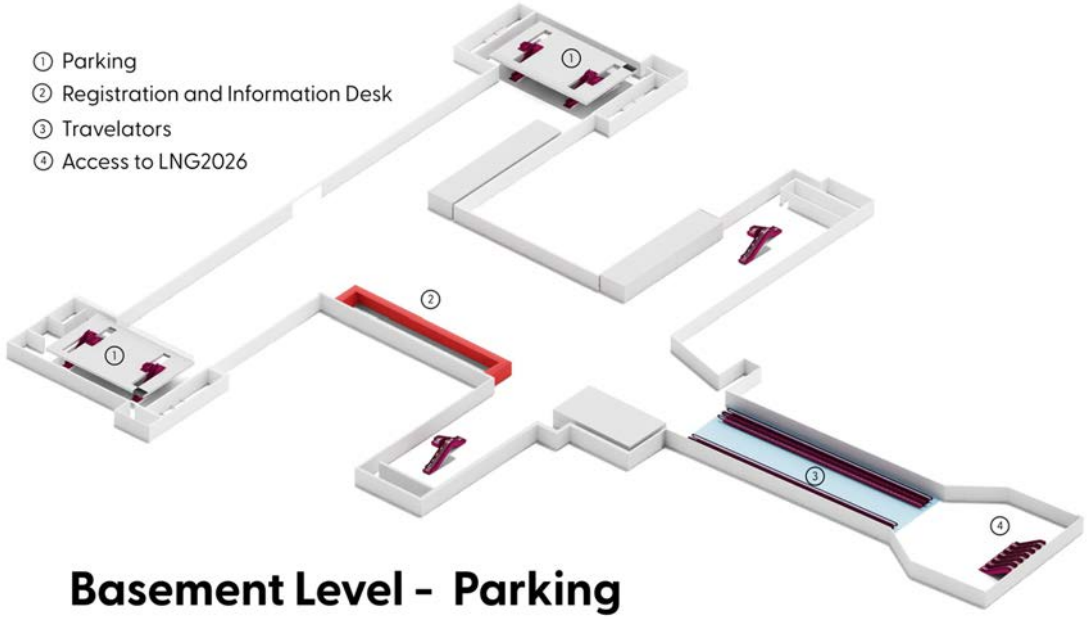
For the full programme, remember to download the LNG2026 Event App and manage your programme schedule through the app. •

Tuesday's Programme at a Glance

For the full up-to-date programme, remember to download the LNG2026 Event App and view the latest programme schedule.

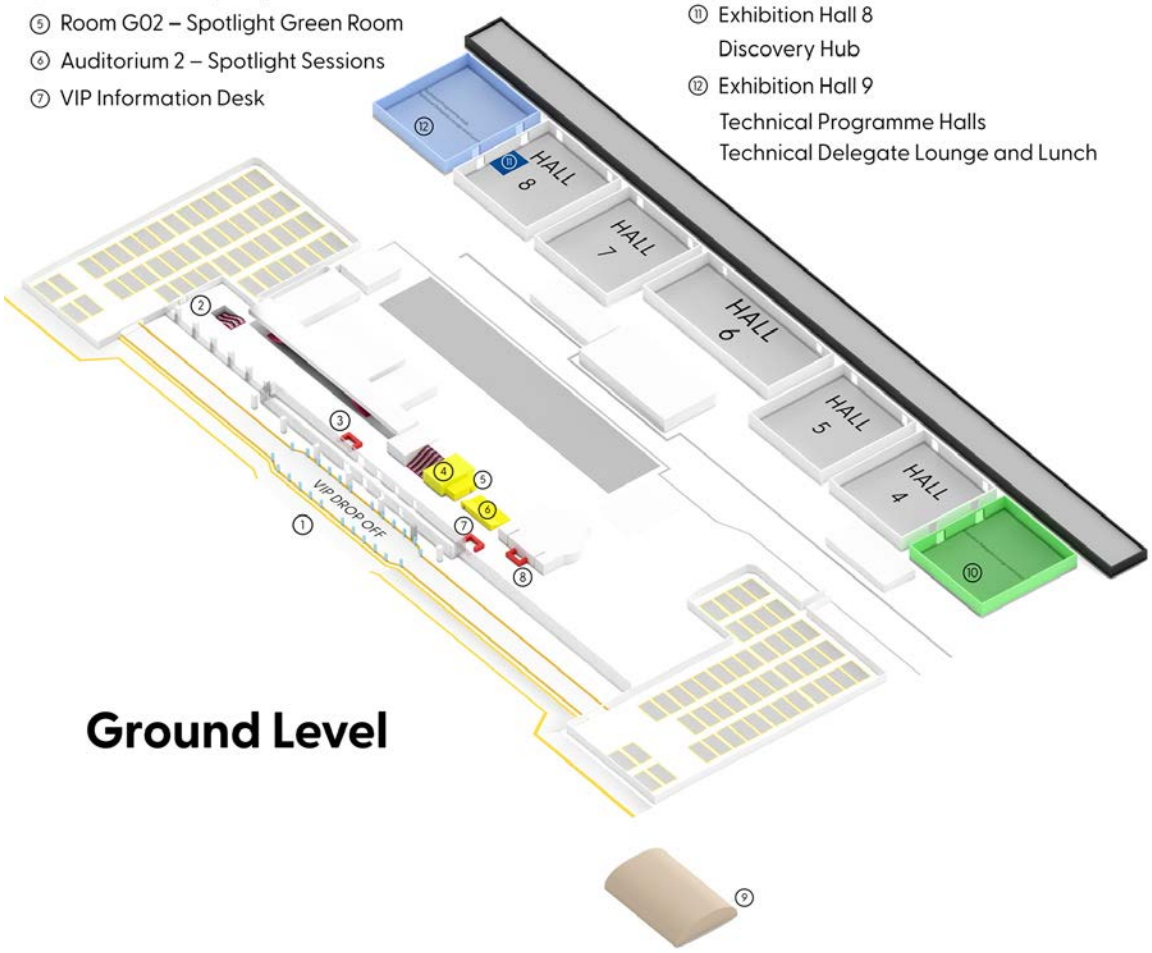
9:00-9.30	PL02 -Perspectives on Gas, Growth and Energy Security	Conference Hall
9:30 - 10:30	PL03 - LNG: A Critical Enabler for a Lower-Carbon Future	Conference Hall
10:30 - 10:45	Break	
10:30 - 12:00	TP01 - Increasing End Use Applications of LNG	Technical Programme Hall A
	TP02 - LNG Demand and Demand Drivers	Technical Programme Hall B
	TP03 - Project Updates and Execution Strategies	Technical Programme Hall C
10:45 - 11:45	SP03 - Seas of Change: LNG Shipping in an Evolving Energy Landscape	Auditorium 2
	SP04 - The Growth of North America's Gas Market	Auditorium 1
12:00 - 13:00	Lunch	
13:00 - 14:00	PL04 - Achieving Success Together: Cultivating Strategic Partnerships in LNG	Conference Hall
14:00 - 14:15	Break	
14:00 - 15:30	TP04 - Shipping, Marine and Port Operations: Advances in Shipping and Port Operations	Technical Programme Hall A
	TP05 - Shaping the Market: LNG Buyers' Perspectives and Future Expectations	Technical Programme Hall B
	TP06 - Developments in Gas Processing, Liquefaction and Floating Plant Technology	Technical Programme Hall C
14:15 - 15:15	SP05 - ESG Regulations: How do they Impact LNG Trade?	Auditorium 1
	SP06 - Trading Places: How Buyers are Redefining the LNG Landscape	Auditorium 2
15:30 - 15:45	Break	
15:45 - 17:15	TP07 - Finance: Recent Developments and Future Evolution	Technical Programme Hall A
	TP08 - LNG Industry Evolution: Focus on LNG Supply	Technical Programme Hall B
	TP09 - Operations, Best Practices, Process Safety: Operational Efficiency, Optimisation and Emission Reduction	Technical Programme Hall C

LNG2026 Floorplan



Basement Level - Parking

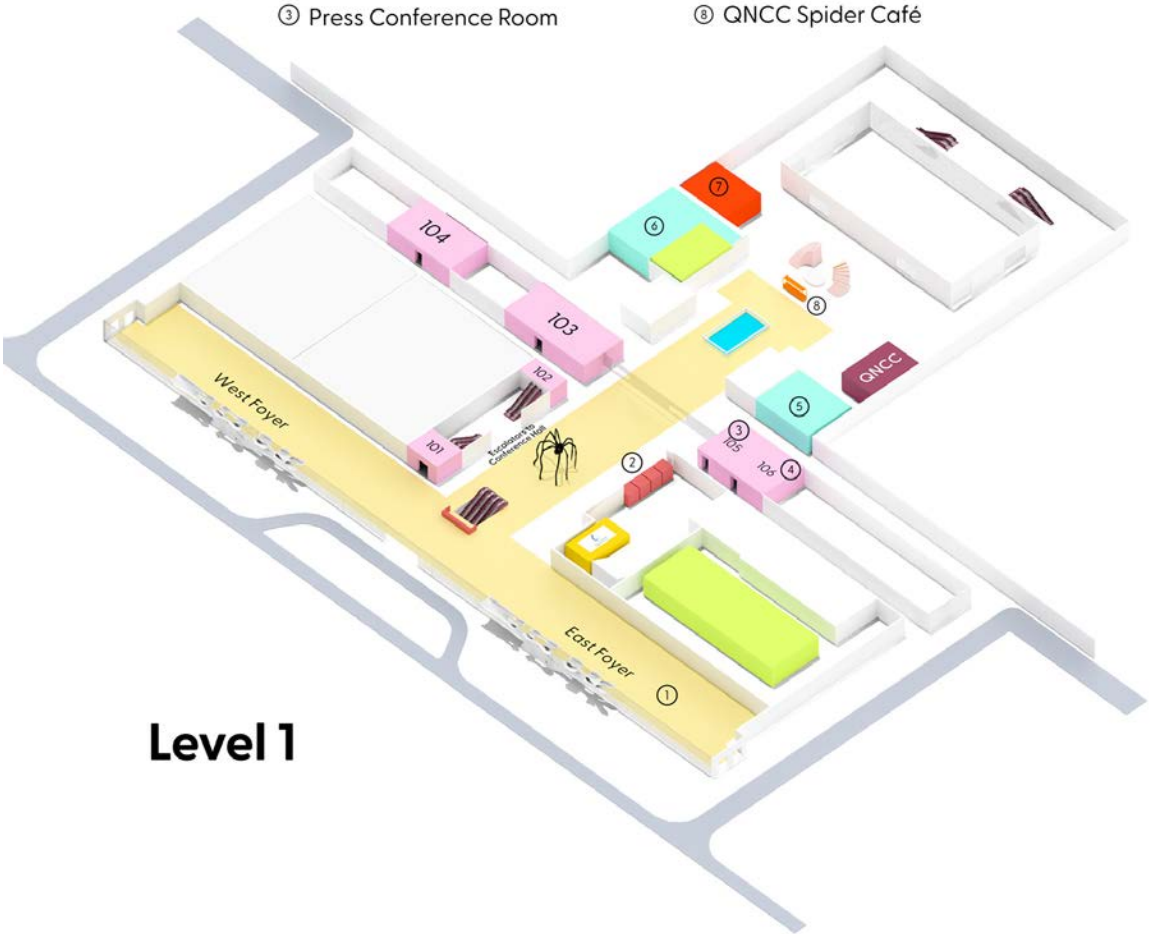
① VIP Entrance
② Access to Parking
③ Cloakroom/Lost and Found
④ Auditorium 1 – Spotlight Sessions
⑤ Room G02 – Spotlight Green Room
⑥ Auditorium 2 – Spotlight Sessions
⑦ VIP Information Desk
⑧ Delegate Bag Collection Desk
⑨ Qatar National Library Station
⑩ Exhibition Hall 3
Executive Delegate Lounge and Lunch
⑪ Exhibition Hall 8
Discovery Hub
⑫ Exhibition Hall 9
Technical Programme Halls
Technical Delegate Lounge and Lunch



Ground Level

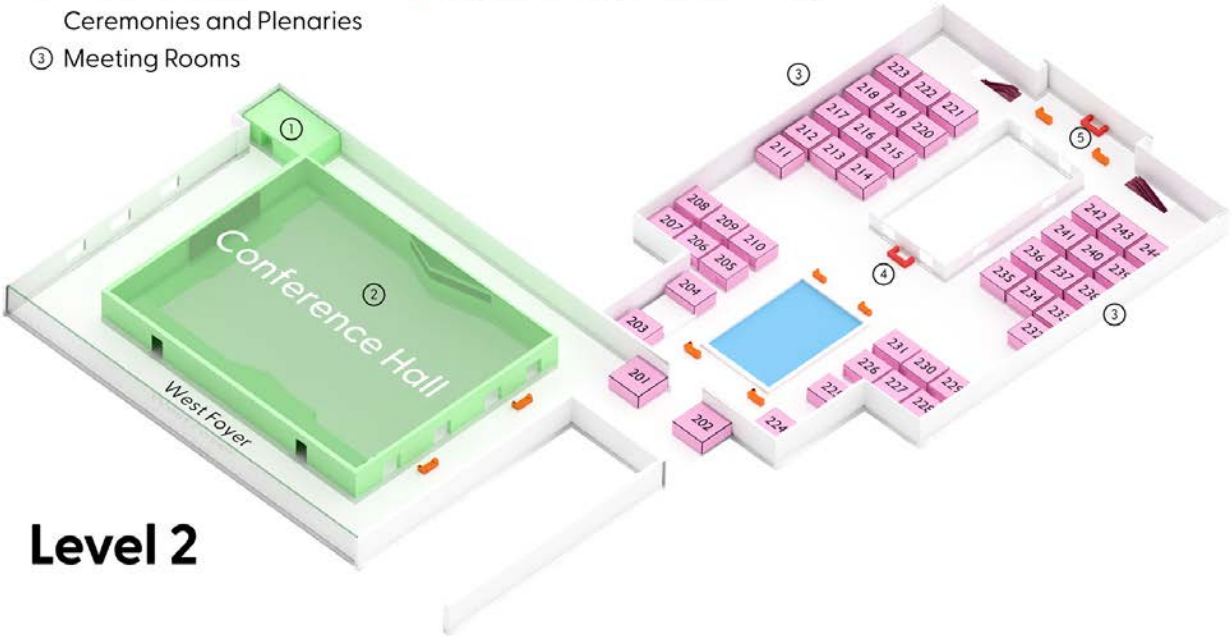
LNG2026 Floorplan

① Networking Reception (Day 3)
② Media Information Desk
Information Desk
Event App Support
③ Press Conference Room
④ Media Centre
⑤ Male Prayer Room
⑥ Female Prayer Room
⑦ Medical Centre
⑧ QNCC Spider Café



Level 1

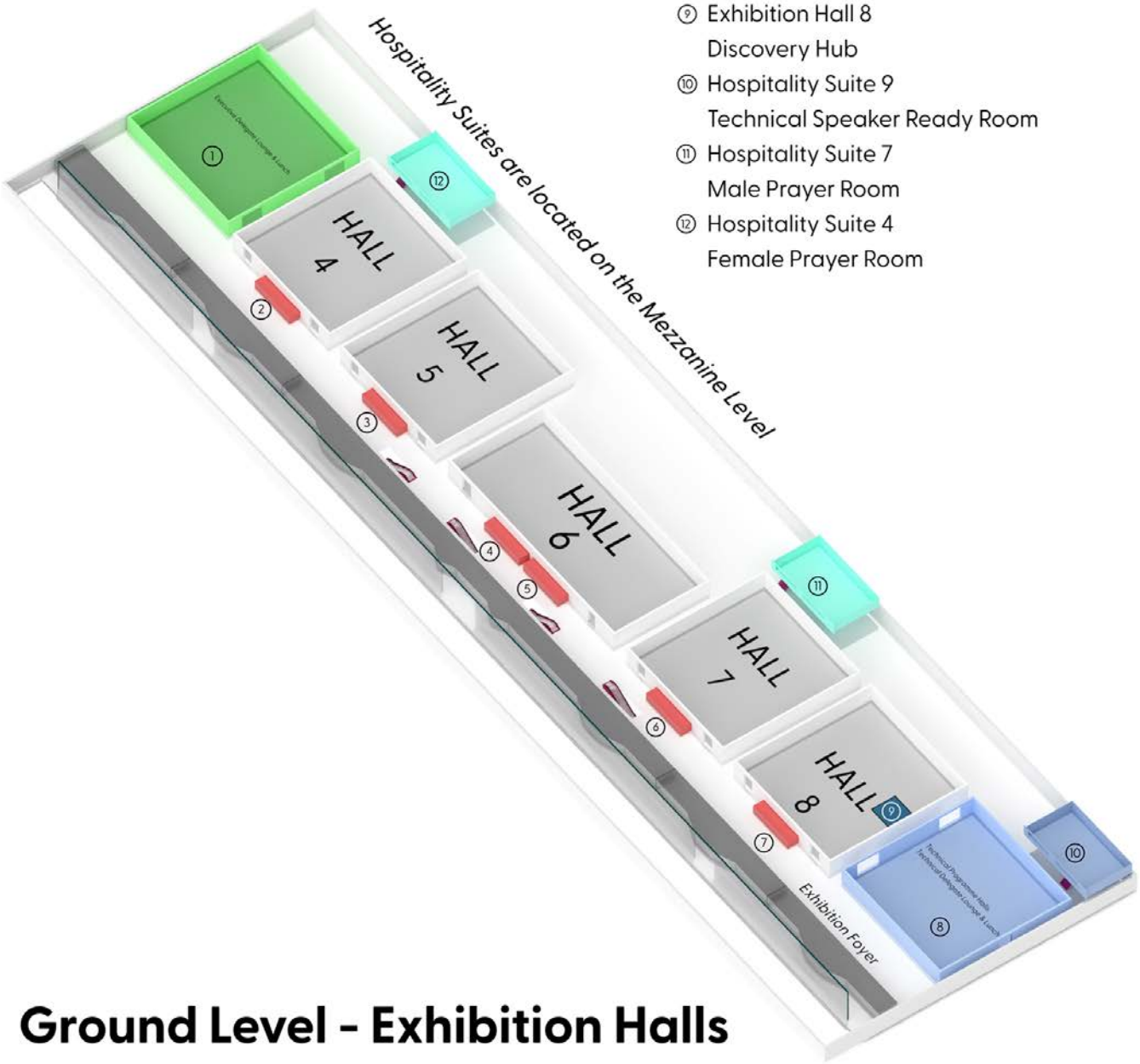
① Plenary Green Room
② Conference Hall - Ceremonies and Plenaries
③ Meeting Rooms
④+⑤ Meeting Rooms Information Desk
Executive Delegate Coffee Break



Level 2

LNG2026 Floorplan

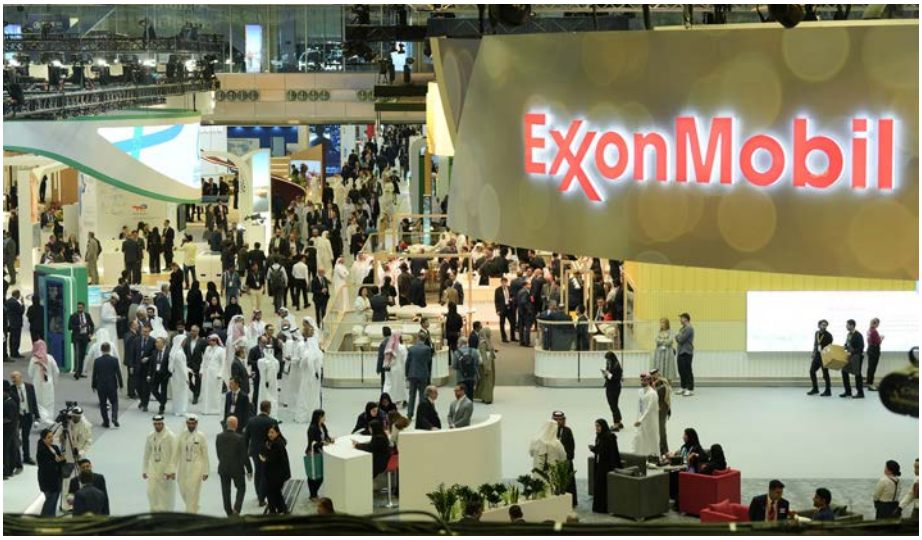
① Exhibition Hall 3
Executive Delegate Lounge and Lunch
② Trade Visitor Registration Desk
③ Trade Visitor Registration Desk
④ Conference and Exhibition Accreditation
⑤ Information Desk/Event App Support
⑥ Trade Visitor Registration Desk
⑦ Cloakroom
⑧ Exhibition Hall 9
Technical Programme Halls
Technical Delegate Lounge and Lunch
⑨ Exhibition Hall 8
Discovery Hub
⑩ Hospitality Suite 9
Technical Speaker Ready Room
⑪ Hospitality Suite 7
Male Prayer Room
⑫ Hospitality Suite 4
Female Prayer Room



Ground Level - Exhibition Halls

Monday's Highlights

The Opening Ceremony of LNG2026 kicked off the week by welcoming the global LNG community. Delegates, industry leaders and experts from around the world came together to discuss industry trends and share practical insights. Conference sessions sparked meaningful conversations, while the exhibition floor showcased the latest LNG technologies and solutions. A memorable start to the week. •



What to Expect on Wednesday

EXECUTIVE PROGRAMME: Plenary Sessions

Exploring Europe's Gas Future

As Europe reshapes its gas supply portfolio, this session examines LNG's role in energy security and market stability, focusing on supply diversification, contracting strategies, and infrastructure readiness across the region.

Wednesday 4 February 9:30 I Conference Hall, Level 2

The Competitive Advantage of LNG: Creating Accessibility and Affordability for Emerging Markets

LNG can unlock economic growth in emerging markets, but success depends on accessibility and affordability. This session will examine strategies and policies to expand LNG supply, strengthen customer confidence and support long-term, sustainable market development.

Wednesday 4 February 13:00
Conference Hall, Level 2

EXECUTIVE PROGRAMME: Spotlight Sessions

Fuelling the Future: Navigating the Evolving Landscape of LNG Project Financing

Industry leaders discuss the challenges and opportunities in LNG project financing, innovative strategies and the impact on gas affordability, particularly in emerging markets.

Wednesday 4 February 10:45 I Auditorium 1

The Continued Evolution of LNG

Experts explore the evolving LNG trading landscape, the role of legacy financial players and large NOCs and the characteristics of successful traders in a volatile market.

Wednesday 4 February 10:45 I Auditorium 1

TECHNICAL PROGRAMME: Paper Presentations and Panel Discussions on Commercial Topics

Improving Environmental Performance across the LNG Value Chain– New Technologies and Strategies

This session highlights new concepts and technologies advancing LNG decarbonisation, including carbon capture on brownfield projects to 'e-methane' production.

Wednesday 4 February at 10:30
Technical Programme Hall A •

Discover Qatar

Art and Culture in Doha, Qatar

Qatar's enchanting culture and lively art scene draw you in wherever you go from iconic museums, jaw-dropping public art, buzzing souqs, modern architecture and historical sites, all waiting to be explored.

Museum of Islamic Art

A world class museum housing one of the most extensive collections of Islamic art spanning over 1,400 years. Designed by I.M. Pei and set on its own jetty overlooking the Doha Corniche, it includes galleries, educational spaces, a café and the fine dining restaurant IDAM by Alain Ducasse.

Location: MIA Park, The Corniche

Visit Website: mia.org.qa

National Museum of Qatar

Designed by Pritzker Prize winning architect Jean Nouvel, the National Museum of Qatar is inspired by the desert rose and built around the historic palace of Sheikh Abdullah bin Jassim Al-Thani. The museum features a series of immersive galleries that explore Qatar's history, culture, environment and modern development.

Location: Museum Park Street, off the Doha Corniche

Visit Website: nmoq.org.qa

Arab Museum of Modern Art

The museum houses a rich collection of modern and contemporary Arab art, including paintings, sculptures, photography and multimedia work. Rotating exhibitions and educational programs that explore Arab cultural identity and artistic innovation.

Location: Education City, Al Shagub

Visit Website: mathaf.org.qa

Al Zubarah Archaeological Site

A UNESCO World Heritage Site, Al Zubarah is one of the best preserved examples of an 18th–19th century trading and pearling town in the Gulf region. Visitors can explore the remains of the walled town, fort, residential areas, mosques and markets, offering insight into Qatar's pre-oil history.

Location: Near Madinat Ash Shamal, Al Zubarah

Visit Website: qm.org.qa/en/visit/heritage-sites/al-zubarah

More Cultural Highlights to Explore

- Msheireb Museums–Four historic heritage houses in downtown Doha with immersive storytelling
- Katara Cultural Village–A hub for art, music, theatre, and exhibitions, celebrating global and Qatari cultures
- Souq Waqif–Historic market district offering traditional shopping, dining, and crafts •

Gas Outshines Expectations

Industry leaders make the case for a critical role for natural gas in the global energy mix for decades to come | **Joseph Murphy,** Senior Gas Analyst, *Petroleum Economist*

Growth in global demand for natural gas and, in particular, LNG will far surpass previous expectations, driven by rising energy consumption in developing economies as well as increased electrification and, more recently, the rise of AI and datacentres, some of the world's largest oil and gas companies told delegates at LNG2026.

The session, entitled 'Global LNG Dynamics: An Industry Perspective', featured His Excellency Saad Sherida Al-Kaabi, Minister of State for Energy Affairs, President and CEO of QatarEnergy; ConocoPhillips CEO Ryan Lance; ExxonMobil CEO Darren Woods; Shell CEO Wael Sawan; and TotalEnergies CEO Patrick Pouyanné. It was moderated by Michael Stoppard, principal at Stoppard Energy.

Faith in gas

ExxonMobil's Woods said gas uniquely addressed the need to provide affordable and reliable energy while also reducing emissions, adding it would be used for decades in the future.

The outlook for gas is supported by the pace of growth in energy demand, Shell's Sawan said. "The world is adding the energy demand of Switzerland every single month at the moment and will continue to do so up to 2050," he said. "And gas has a particularly important role to play."

The world is adding the energy demand of Switzerland every single month at the moment, and will continue to do so up to 2050 –Sawan, Shell

Gas is the fastest-growing non-renewable energy source, he said, with demand for LNG specifically increasing at an even faster pace. Driven by increased energy consumption, primarily in Asia, Shell's latest LNG Outlook projects a 60% growth in LNG demand by 2040.

His Excellency Minister Al-Kaabi said the country's planned massive expansion of LNG capacity reflected its firm belief that gas demand will rise more quickly than once assumed.

"We have expanded in gas tremendously," H.E. Minister Al-Kaabi said, citing expectations of future demand growth not only from economic expansion, "but also, furthermore, because of AI". QatarEnergy's FID on the North Field East project, due online later this year and set to produce 32mt/yr of LNG at full capacity, was taken in February 2021, at a time when global gas prices were still bearish in the wake of the COVID-19 pandemic, and there were calls by some policymakers and organisations to limit further investment in fossil fuels.

Greenlighting such an ambitious expansion at such a time was "courageous", the minister said, adding the decision was based on confidence that the market would need this volume in the future. His Excellency Minister Al-Kaabi said a "cancel culture" seen for several years around oil and gas had faded as policymakers and consumers recognised the continuing need for hydrocarbons.

TotalEnergies' Pouyanné noted the dramatic reappraisal of natural gas that had occurred over the past three decades since he joined the industry.

"When we were exploring and found gas, it was considered a failure. To monetise the gas was really a challenge," Pouyanné said, adding that falling LNG costs and improvements in technology had transformed the fuel into a cornerstone of the modern energy system.

"We made a revolution in slashing the cost of LNG and making it affordable," he said.

ConocoPhillips' Lance said LNG demand alone could double over the coming decades, with gas and LNG increasingly critical for meeting peak electricity demand in both advanced and developing economies. Asia will absorb the majority of this incremental supply, he said, noting that some traditional exporters in Southeast Asia are becoming importers as domestic gas production declines and as populations grow. China, India and ASEAN countries will be major growth centres, he said, but there will also be emerging demand in sub-Saharan Africa and Latin America.

Woods agreed the strongest growth will occur in regions where people are "growing out of energy poverty" and economies are expanding rapidly.

Sawan noted that the role of AI as a primary driver of long-term energy growth was overstated, saying that, in reality, the largest source of growth was rising energy use among people moving from low- to middle-income lifestyles. AI's bigger impact may be in how energy systems are managed, he added, through smarter grids and load balancing.

Woods said billions of people still live in energy poverty and that improving living standards will require large increases in reliable power, with gas playing a major role.

AI, by contrast, is creating incremental demand mainly in developed economies, particularly the US. Lance said US power demand had been flat for decades but is now rising because of electrification and AI.

Don't fear oversupply

Although the world is on the verge of receiving a substantial wave of new LNG supply over the next few years, primarily from the US and Qatar, the panellists played down fears of prolonged oversupply. Lance expressed doubt about such fears, pointing to the cyclical nature of the industry.

"There may be a soft spot for a few months or maybe a year, but we're looking at decades," he said.

Sawan said the energy crisis following the start of the Russia-Ukraine conflict showed the dangers of underinvestment.

The priority now, he said, is rebuilding confidence that supply will be available for countries investing in import terminals, power plants and gas infrastructure, in order to "build demand sustainably for the future".

Woods said the LNG market differs from oil because most volumes are sold under long-term contracts, which helps moderate supply swings.

Pouyanné said LNG is extremely capital-intensive and inherently cyclical, pointing to the lack of new FIDs between 2022 and 2025 as evidence that companies tend to hold back investment when prices and cash flows are low, only to accelerate spending once markets tighten.

In contrast, H.E. Minister Al-Kaabi said QatarEnergy anticipated a period of oversupply between 2025 and 2030 but proceeded with its projects even during the COVID-19 pandemic—while many other companies de-

We know what wins all the time: low cost and low emissions intensity – Lance, ConocoPhillips

terred investment—leveraging its strong balance sheet.

Talking strategy

The speakers also characterised their companies' strategies with regards to LNG and the broader oil and gas sector.

Woods said ExxonMobil focused on identifying globally competitive resources and using technology to unlock value. Rather than an oil and gas company, "we describe ourselves as a tech company", he said, pointing to the use of advanced technologies in the Permian Basin to increase recovery rates, as well as the company's large chemicals business and inroads into the carbon capture, utilisation and storage (CCUS).

Pouyanné said TotalEnergies' LNG strategy is built around diversification and scale.

"We produce LNG in 12 countries," he said, arguing that large resource bases and large-scale projects offer superior economics and long-term resilience. The company continues to expand in Qatar and Mozambique, among other locations.

Oil and gas remain central to TotalEnergies' identity, Pouyanné said, describing them as part of the company's "DNA". The company's corporate strategy is "more energy and less emissions", spanning oil, gas and electricity. TotalEnergies has built a larger power generation and electricity trading business than many of its peers, alongside its hydrocarbons portfolio.

Lance said ConocoPhillips, as one of the largest LNG suppliers globally, is developing around 15mt/yr of US LNG capacity. The company produces about 2bcf/d of natural gas in the US but markets far larger volumes across North America, thanks to its strong unconventional position.

"We know what wins all the time: low cost and low emissions intensity," Lance said.

Lance added that ConocoPhillips expects continued growth in oil demand alongside strong growth in gas and LNG, focusing investment on resources with the lowest cost of supply and lowest emissions intensity.

His Excellency Minister Al-Kaabi said QatarEnergy's projects aim to deliver some of the lowest-carbon LNG in the world through large-scale CO_2 sequestration. Supporting its LNG production, the company also has significant trading capability as well as a vast LNG carrier fleet—set to number 200 in the future. Beyond Qatar, QatarEnergy is also developing the 18mt/yr Golden Pass project in the US with ExxonMobil.

"Having the size and the capacity and flexibility gives our customers something that's not available with many sellers," he said.

QatarEnergy is one of the world's largest holders of exploration acreage, he said, and remains active in both oil and gas exploration globally.

Oil will be needed "for a very, very long time", H.E. Minister Al-Kaabi said, pointing in particular to petrochemicals, which rely on liquid hydrocarbons as feedstock.

Sawan said Shell seeks to be competitive both on cost and carbon intensity. He highlighted the start-up of LNG Canada, which provides a new route linking North American gas supply with Asian markets and draws power largely from a renewables-dominated grid.

Shell is also investing heavily in LNG bunkering. The company now operates about 25 LNG bunkering vessels globally, allowing marine customers to refuel at multiple ports and supporting LNG's role as a shipping fuel. •

PARTNERED CONTENT

Decarbonising LNG: How Siemens Energy Is Accelerating the Transition to an All-Electric Future

Interview with **Giuseppe Sachero,** Global Head of Oil & Gas and Chemicals for Electrification, Automation and Digitalisation at Siemens Energy

How is Siemens Energy helping LNG developers and operators reduce emissions through electrification?

Sachero: Electrification is the most practical strategy for decarbonising LNG production, but it comes with technical challenges. Siemens Energy supports the transition by partnering with end users and contractors to optimise plant design through engineering standardisation, technology selection and modularisation.

We also conduct grid studies and dynamic modelling to predict electrical system behaviour under different operating conditions, addressing challenges such as harmonic distortion and system stability—key areas as the industry shifts from mechanically driven refrigeration trains to electrified solutions.

What are some specific challenges eLNG plants face when it comes to electrical system design and plant operation?

Sachero: Gas liquefaction requires significant energy—around 0.25kWh to liquefy 1 kg of natural gas. A 5mt/yr LNG facility needs 140MW, while an 18mt/yr plant may require up to 800MW.

As power demands rise, so does system complexity. While many e-LNG plants use self-generated power from gas or steam turbines, more developments are exploring grid connections to leverage clean energy sources like wind, solar and nuclear, or hybrid designs combining on-site generation with utility power. Careful system modelling is essential to manage interactions between e-drives in refrigerant trains and other consumers, ensuring stable, safe operation.

What solutions does Siemens Energy offer to help customers address grid stability and harmonic disturbances in eLNG plants?

Sachero: Every eLNG project is unique, requiring tailored solutions to ensure grid stability and mitigate harmonic disturbances. Static var compensators are commonly used for reactive power compensation and voltage stability, but have limitations for addressing harmonics. STATCOMs, a dynamic compensation technology for voltage regulation and reactive power control, are gaining traction despite historically being viewed as costly. Battery storage systems help stabilise electrification concepts, ensuring reliable power and enhanced performance. Recognising the continuous operation demands of LNG plants as baseload facilities, Siemens Energy has developed a digital platform for energy management and for dynamic simulation to optimise energy use and maintain operational stability.

Are you seeing any region-specific trends or strategies when it comes to decarbonisation and electrification?

Sachero: While electrification of LNG production is a global trend, regions like the Middle East and North America stand out due to access to stable green power sources like hydro and nuclear.

Siemens Energy is actively involved in projects in these regions, such as Canada's Woodfibre LNG, which uses hydropower to achieve low emissions. We provided critical equipment for the refrigeration trains, including compressors, motors, drives and harmonic filters. For a large-scale e-FLNG project, we delivered a high-voltage marine solution featuring a 132kV transformer and gas-insulated switchgear. These projects highlight the potential of combining advanced technology with a commitment to sustainability.

New developments in East Africa and Asia-Pacific are emerging, where dedicated power generation and improved electric access offer opportunities to electrify LNG facilities and support neighboring infrastructure.

What, if any, strategies or lessons do you think the LNG industry can take from other sectors where electrified approaches are more "mature"?

Sachero: The LNG industry can learn from sectors like steel mills and HVDC transmission lines, where solutions for managing electrical system stability and harmonics have been applied for decades. eLNG plants, among the most complex industrial facilities, require a holistic approach to optimise the electromechanical system—from compressors to power generation. This ensures a robust design that guarantees stability and safety in both steady-state and transient conditions. •

IGU Secretary General Urges Continued Innovation in Gas Industry

Sector's success depends on 'constant innovation and optimisation', Mel Ydreos tells delegates as he warns against complacency and urges industry to keep pushing boundaries | **Joseph Murphy**

The global natural gas industry has much to be proud of but must guard against complacency and continue to innovate, Mel Ydreos, general secretary of the International Gas Union (IGU), said at the opening session of the LNG2026 conference.

"We should not be complacent—our industry's success depends on constant innovation and optimisation, pushing the boundaries of what is feasible and possible," Ydreos told delegates. He also urged the sector to strengthen global advocacy efforts, emphasising the role of gas—and particularly LNG—in bolstering energy security while cutting emissions.

"This should not just be with words, but with fact-based evidence," he said.

LNG2026—the 21st edition of the triennial conference—offers a moment to reflect not only on the progress of the gas industry but also on the fuel's future role, Ydreos added. The event provides a platform to explore new collaborations and partnerships, and to exchange ideas on the challenges and opportunities facing the sector.

The choice of Qatar as host is especially apt, he said, as the country prepares to launch a major expansion of its LNG capacity. Together with additional volumes expected from the US, this will form a significant new wave of global LNG supply set to reach markets in the coming years.

"We are on the cusp of a new wave of global supply—so it is fitting that we are in Qatar," Ydreos said, thanking QatarEnergy for its "tremendous organisational effort [that] exceeded every expectation".

Beyond its standing as a leading LNG exporter, Ydreos also described Qatar as "a superb country with history deeply steeped in the mirage of the desert, with the hospitality and warmth of its people, and with a capital city that is a feat of human ingenuity and unparalleled breakthrough design".

The LNG2026 programme has been shaped by abstracts submitted by experts from around the world. The response to the call for papers was "unprecedented" in the conference's history, Jim Solomon, chairman of the LNG2026 Programme Committee, told delegates.

A total of 500 abstracts were received, a 50% increase on the number submitted for LNG2023, which was held in Vancouver, Canada.

"Since the overall quality of the abstracts was excellent, the committee was faced with the daunting task of selecting only the best for presentation this week through an objective and rigorous selection process," Solomon said. "In the end, only one out of four abstracts made the cut, and these abstracts were assembled into the programme you will see over the next three days."

The final programme is organised around three formats. Thirteen formal paper sessions, each moderated by a committee member, will feature shortened presentations of selected papers followed by audience questions. Five panel discussions will bring together expert speakers to introduce key topics and engage in moderated, informal debate. In addition, a "discovery hub" on the exhibition floor will showcase poster abstracts in an interactive electronic format, with a dedicated poster session on Wednesday afternoon allowing delegates to meet authors one-on-one.

Solomon thanked the technical programme team, the LNG2026 national organising and steering committees, and host QatarEnergy for their sustained support, as well as programme committee members who have worked on the event for several years.

"In closing, I can honestly say that, while I personally have been involved in the LNG industry for over three decades, I have never witnessed a more exciting and dynamic time for the LNG industry," he said. "I'm certain that this week will reveal the potential for LNG to continue to grow as a vital component of the worldwide energy mix." •

LNG Synonymous with Security of Supply

Top industry executives argue that LNG has shown its mettle in the face of geopolitical risk and disruption | **Paul Hickin,** Editor-in-Chief and Chief Economist, *Petroleum Economist*

LNG has proven to be a versatile, resilient and flexible source of energy, and elevated geopolitical uncertainty has highlighted the crucial role the fuel will continue to play—especially given its increased diversification—in-dustry leaders told a panel at the LNG2026 conference.

"You don't have to go too far back into 2022, in which we saw pipeline imports into Europe drop significantly. And we've seen firsthand how the LNG market specifically reacted to that. European markets increased LNG imports by over 60%. And naturally, we saw the price response that we're all very familiar with, but it's really quite shocking to imagine how a country or region can respond as quickly as they did," said Kirk Johnson, senior vice president, glob-al operations, ConocoPhillips.

The combination of regional instability, geopolitics and policy shifts have all come together to create volatility across the global landscape, with risks of supply shortag-es creating a price response. And the potential for greater supply in the next five years could also develop a price re-action, according to the industry leaders at a panel called 'Geopolitics and the Future of LNG'.

However, Johnson noted that, over the next 5–7 years, more than 50% of the projects that are out there global-ly are likely to face some sort of delay, especially when considering the level of global investment within a finite period.

"It shows there's going to be a lot of events globally that move markets, but within a free market, if it's allowed to do as it should, there will a price response, and there will be an equal and opposite supply response," Johnson added, stating it shows the resilience and adaptability that exists.

Peter Clarke, head of global LNG at ExxonMobil, un-derscored the message that "as an industry, we've proven how critical LNG is to supply stability, in stable times but also to weather supply disruption".

Clarke talked up LNG's role in replacing pipeline gas and providing greater optionality and the speed to respond to market disruptions, referencing how Europe was able to wean itself off its reliance on Russian piped supplies.

As an industry, we've proven how critical LNG is to supply stability – Clarke, ExxonMobil

"It's about taking and developing gas energy supplies where the resources are abundant and then moving them to where it's needed," he added, noting the importance of developing a robust and diversified portfolio.

The panellists also highlighted the fact that, when there is a supply disruption, consumers really rely on big suppli-ers that have strong capability in shipping and scale, very much like Qatar, which has an oversized impact in in sta-bilising supply.

Cederic Cremers, president, integrated gas, Shell, un-derlined the point, saying "geopolitical risk has actually shown the strengths of LNG as a versatile, flexible and re-liable source that is able to manage these kinds of chal-lenges in terms of geopolitical risks and the invasion of Ukraine and what that did to Europe." LNG from suppliers such as Qatar stepped up to meet that challenge, Cremers pointed out.

"The reliability of the global diversification that we offer to customers, the discipline to deliver day in, day out and meet our promises to them," Cremers noted, is how trust and confidence are built.

Stéphane Michel, president of gas, renewables and power, TotalEnergies, added that the big lesson of the Fukushima disaster is that Japan avoided a blackout be-cause of LNG. "Because that country lost 30% of its supply in a day and our system is so flexible that the LNG industry was able to save such a country," he added.

"The truth is, I never imagined that that could happen in such a big market as Europe," he said, referencing the Rus-sia crisis. "We didn't suffer any blackout, and I think that's quite remarkable. We were able to completely shift all our portfolio from Asia to Europe." •

Navigating the Next LNG Cycle

Eni's director for global gas and LNG portfolio, Cristian Signoretto, discusses how demand will respond to rising LNG supply, and how the company is expanding its own gas and LNG operations through disciplined, capital-efficient investments | **Joseph Murphy**

Much more LNG will arrive on the market in the coming years. How confident are you that extra demand will emerge to absorb this supply, and what will drive this growth in consumption?

Signoretto: Among traditional energy sources, LNG is for sure the brightest spot, with demand expected to grow steadily over the next years from around 400mt in 2024 to around 600mt at the beginning of the next decade.

Projections show, on the other hand, that the arrival of a new wave of LNG supply will come at a speed expected to initially outpace that of demand over the next few years (2027–30), therefore causing a bearish impact on prices.

This means some additional demand will be needed to absorb increasing supply, both via structural growth (especially in rapidly developing countries in South Asia and Southeast Asia) and via elasticity, with expected lower LNG prices triggering additional demand.

In fact, markets are becoming more and more flexible and sophisticated in their behaviours and quick in reacting to pricing stimulus (interfuel competition, opportunistic buying, increasingly flexible infrastructures and regas facilities). Some of the aforementioned regions and also other larger importers (e.g. China) have already proven their ability to react rapidly to such triggers and take profit of such optionality, thus effectively contributing to rebalancing the market.

In any case, this cyclical pattern is well known in the LNG business. In fact, after some years in which supply is higher than demand, the market rebalances itself, given that current sanctioned projects and probable developments will possibly already fall short of the increase in demand, especially considering the depletion of older projects at the beginning of the next decade.

Last year saw record FIDs on new liquefaction capacity. To what extent do you think this momentum will be maintained in 2026?

Signoretto: 2025 was an exceptional year for the global LNG industry, with approximately 70mt/yr of liquefaction capacity sanctioned worldwide. This unprecedented pace was largely driven by regulatory action from the US administration, which eased permitting bottlenecks that had previously stalled key US liquefaction projects.

Looking ahead, 2026 is expected to deliver additional FIDs, with the US to remain the key contributor, although not at the extraordinary scale seen in 2025. This year should remain an active one for project progression and selective FIDs, with activity increasingly focused on projects underpinned by solid commercial structures, regulatory certainty and competitive cost.

In this evolving landscape, backfill projects and innovative development partnerships will play a critical role. By leveraging existing liquefaction infrastructure or integrated value chains, backfill developments can significantly reduce capital costs and accelerate time to market—advantages increasingly valued by investors in an environment of tightening project economics and increasing competition for capital.

Eni is targeting multiple strategic FIDs in 2026 that exemplify this approach. These include additional LNG

Last year proved to be a landmark one for Eni's gas and LNG activities, marked by the delivery of key project milestones, decisive strategic partnerships and progress toward its long-term production and portfolio targets

production via the Bontang liquefaction plant in Indonesia, focusing on exploiting existing gas infrastructures and existing LNG train capacity; the fast-tracked monetisation of East Mediterranean gas through Egypt's Damietta LNG facility, allowing new assets in Cyprus to be developed as LNG, thus enabling competitive access to regasification markets; and participation in the integrated upstream and midstream Argentina LNG development, in collaboration with YPF. This project, involving the development of two FLNGs, will position Argentina as a rising LNG supplier to global markets.

These initiatives align with Eni's broader strategic objectives of expanding its gas and LNG portfolio through disciplined, capital-efficient investment, leveraging commercial synergies, reinforcing energy security and strengthening long-term commercial positions in key regions.

What do you view as Eni's major accomplishments in the gas and LNG trading space over the past year, and what do you hope to achieve in 2026?

Signoretto: Last year proved to be a landmark one for Eni's gas and LNG activities, marked by the delivery of key project milestones, decisive strategic partnerships and progress towards its long-term production and portfolio targets.

Among the most significant achievements were the start-up of the Merakes East project in Indonesia and the arrival of the Nguya FLNG in Congo-Brazzaville for Phase 2, as well as the ramp-up of Congo LNG Phase 1, reinforcing Eni's global LNG production footprint across Africa and Southeast Asia.

Moreover, new gas developments in Indonesia will underpin additional LNG production from Bontang. Such new projects will satisfy demand in Indonesia while increasing the country's LNG offering to the global market.

A strategic highlight was the FID for Coral North, a Mozambique development advancing on schedule with start-up expected by the end of 2028, in line with Eni's commitment to expanding LNG capacity.

The year also saw material progress on the commercial and partnership front. Eni signed a memorandum of understanding and framework agreement with Petronas to form a joint venture integrating gas and LNG assets in Indonesia and Malaysia. Eni also concluded a heads of agreement and final technical project description with YPF to participate in the integrated upstream and midstream Argentina LNG project.

In the Eastern Mediterranean, Eni reached an agreement with Egypt and Cyprus to fast-track the Cronos gas development offshore Cyprus through the Damietta LNG plant in Egypt, enabling the commercialisation of new

Eni expects natural gas to constitute more than 60% of its upstream hydrocarbon production by 2030, reflecting a conscious shift towards cleaner-burning fuels, before rising to over 90% by 2050

gas production as LNG, strengthening a key supply corridor to Europe.

Commercial momentum continued with the execution of a 20-year LNG supply contract with US exporter Venture Global; two LNG sales contracts with Turkey's Botas (a three-year deal from 2025 and a ten-year agreement from 2028); and a ten-year LNG sales agreement with Thailand's Gulf Development Co., commencing in 2027.

These achievements serve as part of Eni's broader strategic drive towards gas-led production and LNG growth. Under its medium-term roadmap, Eni expects natural gas to constitute more than 60% of its upstream hydrocarbon production by 2030, reflecting a conscious shift towards cleaner-burning fuels, before rising to over 90% by 2050 as part of the company's long-term energy transition agenda. LNG, in particular, is central to this strategy, with contracted volumes expected to grow materially through new projects and supply agreements, strengthening Eni's position in global gas markets.

Collectively, these developments underscore Eni's strengthened execution capability, its focus on a diversified, integrated LNG portfolio, and its commitment to achieving a more gas-centric hydrocarbon mix while supporting energy security and cleaner emission outcomes for global markets. •

Cheniere's Disciplined Expansion

US LNG exporter Cheniere Energy has grown its business rapidly since exporting its first cargo a decade ago. But Chief Commercial Officer Anatol Feygin tells *Petroleum Economist* that, as in the past, the company's future expansion plans are anchored by high levels of contracted offtake, supporting predictable returns on investment | **Joseph Murphy**

As Cheniere approaches the tenth anniversary of its first shipped LNG cargo on 24 February 2016, the US exporter is pressing ahead with a new round of projects, while leaning on a business model it says is designed to keep delivering through a softer price cycle and a more crowded market, Chief Commercial Officer Anatol Feygin told *Petroleum Economist*.

Cheniere spearheaded the US LNG boom, exporting the country's first ever LNG cargo from the Lower 48 states a decade ago. It now boasts a combined total of more than 50mt/yr of liquefaction capacity at its Corpus Christi and Sabine Pass terminals, having completed four mid-scale trains at the former site in just the past year. It will export its 5,000th cargo later in 2026, which Feygin noted was the fastest pace at which any LNG producer had reached that mark.

"Throughout our growth, we have continued to operate the plants safely with mid-90s plus percent reliability rates. And our biggest accomplishment to date is that we have never missed a foundation customer cargo," Feygin said. "This all creates very robust financial performance—we can continue returning substantial capital to our investors and pay down debt, which is becoming less and less as our balance sheet gets stronger."

Cheniere earned a net income of $3b in the first nine months of 2025, up from $2.3b in the previous year, while generating $14.5b of revenue. It authorised a $4b share buyback in June 2024, its third to date, and Feygin said the company was moving quickly to deploy that capital during a period of what he described as modest stock price weakness from autumn 2025 into early 2026.

"We've been very aggressive in rewarding equity investors for their trust and belief in us," he said.

Disciplined expansion

The company's expansion continues. This year it plans to complete three more mid-scale trains at Corpus Christi, which would mark the end of the third stage of development at the facility. In June 2025 it also took FID on adding an eighth and ninth mid-scale train as it targets a boost in overall capacity at the site to 30mt/yr by late 2028.

While Cheniere's growth has been swift, the company's projects are underpinned by an increasingly strong contracting position, Feygin said. In its early years, the company targeted a minimum of 80% contracted capacity. But as it has grown and gained greater operational experience, that percentage has steadily increased. Feygin said Cheniere is now approximately 95% contracted well into the middle of the next decade and has executed additional long-term transactions that could take that figure even higher.

"We plan to continue to grow with the same disciplined parameters that we've always used," he said. One benchmark is whether Cheniere can build projects that earn contracted EBITDA that is roughly 6–7 times greater than capex. Another is the expectation that invested capital is returned within a decade based solely on contracted cash flows. "We're not in the FID business," he said. "We're in the business of generating attractive risk-adjusted returns."

Those principles also define how Cheniere approaches market risk. Feygin said the company does not invest based on a view of prices or cycles. "We never invest capital based on a view," he said. "We invest capital and move forward with projects only when they are fully underwritten by creditworthy, long-term offtake." That structure, he added, explains why Cheniere's exposure to market volatility is limited relative to its size.

Cheniere's next potential growth projects will further leverage the inherent advantages of having brownfield sites, in terms of costs and execution. At Sabine Pass, the company is targeting Train 7, which would add a further 6mt/yr of capacity. At a later stage, the company may also add an eighth and ninth large-scale train.

Corpus Christi LNG Stage 3 (Cheniere)

At Corpus Christi, it is developing up to four additional large-scale trains that would leverage existing infrastructure and add up to 24mt/yr of liquefaction capacity.

On timing, Feygin said Cheniere expects to receive its main permit from the Federal Energy Regulatory Commission for the Sabine Pass expansion very late in 2026. Allowing time to finalise remaining steps, he said the company is now looking at early 2027 as the likely window to take FID on Sabine Pass Train 7, assuming everything proceeds as planned.

Corpus Christi will follow later. Feygin said Cheniere could not pre-file for the next Corpus Christi expansion until it had taken an FID on midscale trains 8 and 9 last June, and that it entered the pre-filing process around two weeks after doing so. From a regulatory standpoint, he said, pre-filing is one of the few elements with a definitive timeline, typically lasting 180 days. Cheniere expects to submit its full application in the current quarter and is optimistic it can move through the process within a typical two-year timeframe, putting a Corpus Christi expansion FID likely in late 2027.

While the company has increased the share of capacity it keeps contracted, Feygin said Cheniere is operating in a market that has become far more liquid and sophisticated than when it shipped its first cargoes. He said the company's financial guidance is based on long-term contracts and shorter-term opportunities that have already been secured. As the market evolves, however, he expects opportunities to emerge that allow Cheniere to re-optimise its portfolio. Those opportunities are not included in guidance until the economics are captured, he said, because margins and volumes are difficult to predict with certainty.

Market evolution

A decade ago, Feygin said, buyers looking for Henry Hub-linked LNG from the US Gulf Coast had only one option: Cheniere. Today, he said, there are "many, many dozens of players", spanning primary, secondary and tertiary volumes. He described this as a positive development for consumers and market growth, and said it would continue to create incremental opportunities for Cheniere beyond its base contracted business.

Customer preferences, he added, have proved more consistent over the years than once expected. In the period before the COVID-19 pandemic, there was extensive discussion about shorter tenors and greater reliance on spot transactions as liquidity increased. Cheniere's view, Feygin said, was always that long-term contracts would remain favourable. As the market grows, he said, there will simply be "more of everything" across spot, mid-term and long-term tenors. While mid-term contracts grew more popular in the late 2010s and spot liquidity has continued to develop, Feygin said the last couple of years have seen tenors of record lengths.

He pointed to the scale of recent project approvals in the US, highlighting how intense the current buildout has become. Around 67mt/yr of US LNG projects reached FID in 2025, he said, but added that much of that capacity is "not necessarily supported by long-term customers". Some projects, he said, are largely—and in some cases

almost entirely—merchant, leaving them more exposed as conditions shift toward a buyer's market.

Europe has been a major destination for Cheniere's LNG in recent years, accounting for close to 70% of its total exports last year, but Feygin stressed that cargo flows are primarily determined by customers rather than by Cheniere itself. Yet he said the company was proud of the role it played in supporting the country's energy security, noting that Cheniere's exports to the EU since 2022 exceeded those of any other country.

Even before the Russia-Ukraine conflict, Feygin said Cheniere believed Europe's gas demand would prove more resilient than some policymakers in Brussels had expected. Those views have been tested by today's high-price environment and the strain it has placed on European industry. While there will be weaker growth in LNG demand in Europe in the coming years, those supplies can be placed in other markets. The extreme prices seen in recent years will hopefully be considered an anomaly in the future, followed by a return to more moderate pricing that supports sustainable demand growth, he said.

Corpus Christi LNG (Cheniere)

Sabine Pass LNG (Cheniere)

Asked about competitiveness in a lower-price environment, Feygin reiterated that Cheniere's investment decisions are insulated from short-term price swings by long-term contracts.

He acknowledged that the company is not entirely immune to market conditions but said exposure is minimal relative to its contracted base. As US liquefaction capacity expands beyond 250mt/yr operating or under construction, the country has moved from a standing start a decade ago to becoming the world's largest LNG exporter. Feygin expects further growth, including at Cheniere, but warned that some newer projects with higher leverage and greater market exposure may face challenges as the cycle turns.

Looking ahead, Cheniere's strategy remains largely unchanged. "From Cheniere's standpoint, we are built to continue to grow and earn these attractive returns and support our customers through the cycles," he said. The elevated margin environment of recent years allowed the company to reach some financial goals faster than planned, he said, but the return of capital and disciplined growth were always part of the strategy. Cheniere does not specifically aim to be the largest or the fastest-growing, he said, and does not pursue FIDs for their own sake, but expects to continue expanding in a measured way, supporting customers through market cycles, political administrations and periods of heightened uncertainty.

Sustainable LNG

The company is committed to making its LNG not just cost competitive but also environmentally competitive, while advancing a climate strategy that is actionable and not just aspirational, Feygin said. He cited its quantification, monitoring, reporting and verification initiatives, conducted with natural gas suppliers, LNG customers, technology providers and academic institutions, which have improved understanding of greenhouse gas emissions across the company's supply chain and informed mitigation strategies. Since 2022, Cheniere has issued Cargo Emissions Tags aggregating emissions data across each stage of the LNG supply chain, including methane intensity at the producer level.

In 2024, Cheniere set a voluntary Scope 1 methane emissions intensity target of 0.03%/t of LNG produced by 2027, updated its lifecycle analysis model with a new gas-pathing algorithm, and earned Gold Standard Reporting status for 2025 under the Oil and Gas Methane Partnership 2.0 framework of the UN Environment Programme.

LNG plays a critical role in meeting growing energy demand, displacing higher-emitting fuels and supporting energy security alongside the expansion of renewables, Feygin said. •

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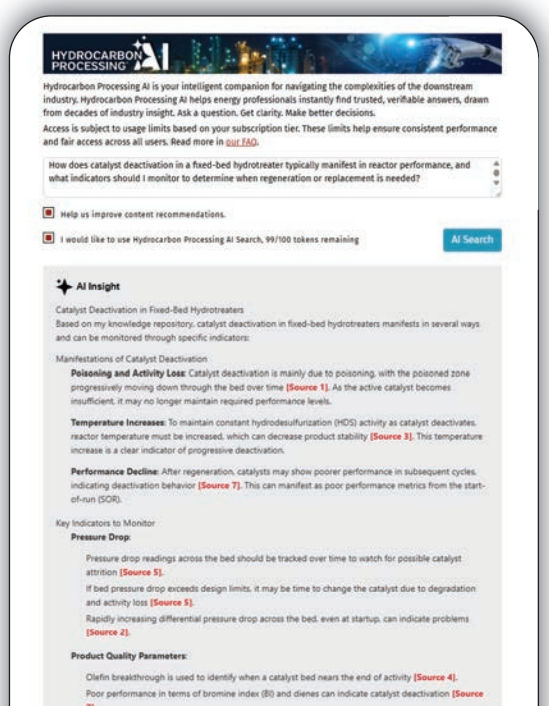

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Mapping the LNG Demand Response

As the LNG market shifts from scarcity to surplus, falling prices are expected to stimulate demand. But unresolved uncertainties across Europe, China and emerging Asia mean the scale of that response remains far from clear, Giovanni Bettinelli, analyst at RBAC, tells *Petroleum Economist* | **Joseph Murphy**

Lower LNG prices are expected to stimulate demand, but the scale of the response remains difficult to gauge. Many markets carry unresolved question marks, and geopolitical risks add further uncertainty, Giovanni Bettinelli, analyst at RBAC, a firm specialising in the development of global gas market models, told *Petroleum Economist.*

Bettinelli described 2026 as a watershed year for the global market. "We are transitioning from a supply-constrained world to one that is more conducive to demand growth," he said, noting that growth in supply was on track to create the conditions for the onset of a period of lower prices for the first time in years.

However, falling prices alone will not automatically unlock a surge in consumption. Instead, Bettinelli argued that demand growth will materialise selectively, concentrated in markets that already have the physical infrastructure to take more gas, and where there is the ability to enter into the long-term purchase arrangements that enable development of new import infrastructure.

Europe

Europe offers only limited scope for additional demand in both the near and long term. Bettinelli said some year-on-year growth could emerge in the short term, but the actual figure will depend on whether prices encourage higher storage injections. Demand has already risen this January as a result of colder weather, which led to higher storage withdrawals, increasing the need for more injections in summer and causing significant short-term price volatility. But how much this will translate into year-on-year growth in imports depends heavily on the spread between summer and winter prices. Current forward curves, with futures prices broadly similar for next summer and next winter, are not conducive to maximising the storage response, he said.

Over a longer horizon, Bettinelli said European LNG demand is unlikely to grow materially from current levels amid weak economic growth, expanding renewable capacity and decarbonisation policies. However, he cautioned against assuming a rapid decline. Europe is likely to remain dependent on gas—and LNG imports—well into the 2040s, particularly in hard-to-abate sectors such as residential heating and industry.

On the supply side, the pace of decline in Norwegian production will play a key role in setting European LNG requirements. And the future of Russian pipeline gas is a "big unknown", Bettinelli said. The EU has finalised plans to end all remaining Russian gas imports by November 2027, although countries still reliant on pipeline imports, such as Hungary and Slovakia, are resisting the phase-out. The outcome will also depend on the form of a potential resolution of the Russia-Ukraine conflict.

China

Up to 2030, China is likely to drive global LNG demand growth, supported by its large regasification capacity and well-developed domestic gas market, which give it the flexibility to absorb additional volumes. But there is still significant uncertainty. Chinese LNG imports fell sharply last year, by 12% according to customs data, partly in response to prices and partly due to rising pipeline gas supply. Russia's Power of Siberia pipeline to China reached its full capacity of 38bcm/yr in 2025.

Bettinelli said pipeline deliveries are unlikely to grow at the same pace this year, opening the door to higher LNG demand, but warned against assuming a rapid rebound. "There is still some uncertainty as to how big that

We are transitioning from a supply-constrained world to one that is more conducive to demand growth

If I were to advise any market participants, I would say be prepared for and understand different scenarios without relying on a single view of the world

demand will be and at what price it will manifest itself," he said, adding that a dramatic jump in Chinese LNG imports was unlikely, at least this year.

Elsewhere in Asia

Then there are the more price-sensitive Asian markets, including India, Bangladesh and Pakistan. These markets could increase imports if prices fall sufficiently, but Bettinelli cautioned that—if global balances come to rely too heavily on them to absorb surplus supply in the short-term—prices may need to fall further than many expect.

Over the longer term, sustained lower prices would have a more profound effect by encouraging new infrastructure investment and driving structural growth in gas demand. Beyond 2030, growth could increasingly shift towards India and Southeast Asia, but that outlook remains highly uncertain. Bettinelli pointed to persistent challenges around infrastructure development, governments' abilities to commit to long-term contracts and the credit quality of some prospective offtakers. Slow project execution and financing constraints could cap the pace at which demand expands.

Concerns have also been raised about the availability of gas turbines as a potential bottleneck for gas-fired power development in emerging LNG markets, but Bettinelli played down their significance. He said other constraints—including making projects economically and politically palatable, competition from renewables, and industrial policy considerations—were more likely to limit the speed of build-out.

Among newer and prospective LNG importers in the region, Bettinelli highlighted Vietnam and the Philippines, where LNG has begun to support growth in the power sector or replace declining domestic gas production. Myanmar could also resume LNG imports after a hiatus of more than four years, although he stressed that such a return would be incremental rather than transformative.

The supply side

On the supply side, lower prices are already feeding back into investment decisions. Bettinelli said it is becoming increasingly difficult for pre-FID projects to secure long-term offtake agreements, noting a sharp decline in new contracts signed in the last quarter of last year. As a result, only projects that are close to sanction, require limited third-party commitments or are backed by sponsors willing to take volumes into their own portfolios are likely to move forward.

In the US, he said a small number of projects, including Texas LNG and Commonwealth LNG, remain credible candidates for near-term FID, while other developments may proceed for strategic reasons despite weaker prices. He pointed to Rovuma LNG in Mozambique and Argentina LNG as examples of projects that could advance as portfolio-driven moves by major sponsors rather than as responses to short-term market conditions.

A further source of uncertainty lies in the ramp-up of new Qatari LNG supply from 2026 and 2027. Bettinelli said the scale of the volumes and limited transparency around start-up schedules make it difficult to forecast precisely how global balances will evolve.

Hedging the forecasts

With demand response uncertain, supply growth accelerating and geopolitical risks adding further volatility, Bettinelli said market participants should avoid relying on a single forecast.

"We're at a pivot point in the evolution of the market," he said, arguing that flexibility and scenario planning will be critical as the LNG industry adjusts to a price-led phase after several years dominated by scarcity. "This has been a key focus of our work of the team developing our G2M2 global market model over the last few years: we clearly can see in the market the need for analytical tools with an increasing degree of flexibility to capture a wide range of scenarios. If I were to advise any market participants, I would say be prepared for and understand different scenarios without relying on a single view of the world." •

A Dual-Coast LNG Strategy

Sempra Infrastructure's vice president for marketing and commercial development, Carlos de la Vega, outlines progress across the company's US Gulf Coast and Mexico Pacific Coast LNG portfolio, including construction at Port Arthur LNG, continued strong performance at Cameron LNG and development of ECA LNG | **Joseph Murphy**

Can Sempra Infrastructure walk us through progress on its key LNG projects and what the company aims to achieve with these projects in 2026?

De la Vega: Sempra Infrastructure's unique dual-coast LNG strategy includes export facilities on both the US Gulf Coast and the Pacific Coast of Mexico, positioning us to serve Atlantic and Pacific markets with competitive, flexible supply.

On the Southeast Texas Gulf Coast, construction of the Port Arthur LNG Phase 1 project is well underway and the Phase 2 project achieved a positive FID in September 2025, with construction commencing immediately thereafter. Port Arthur LNG benefits from extensive US resource basins, strong midstream connectivity and scalable infrastructure.

Combined, Phases 1 and 2 of Port Arthur LNG are designed to include four natural gas liquefaction trains with a nameplate capacity of approximately 26mt/yr, as well as three LNG storage tanks and associated facilities.

In Louisiana, Cameron LNG continues to perform as a world-class facility and remains a cornerstone of our LNG portfolio. US LNG has been delivered from Cameron LNG to 37 countries, and the project celebrated its 1,000th cargo-loading in August 2025. These milestones demonstrate the critical role Cameron LNG serves in global energy markets. Its operational reliability and expansion potential enhances our ability to provide customers with flexible, long-term energy solutions.

Turning to the Pacific Coast, the ECA LNG Phase 1 project is under construction in Baja California, Mexico. Its location provides shorter shipping distances, a more direct route to Asian demand centres and the ability to bypass shipping bottlenecks in the Panama Canal.

Looking ahead, we are focused on becoming North America's leading energy infrastructure company. Through continued operational excellence and advancing our world-class facilities and projects under construction, we are helping to strengthen global energy security and expanding access to reliable US natural gas to meet both immediate and long-term global energy needs.

How does Sempra Infrastructure assess the risk of over-capacity in the global LNG market from the late 2020s onwards, and where does it see the most resilient sources of demand?

De la Vega: The global LNG market is moving into a new era. After years of uncertainty, a clearer picture is emerging: buyers want stability, diversity and competitive prices. These priorities are reshaping the global LNG market and creating long-term growth opportunities for US suppliers like Sempra Infrastructure.

Even with a wave of new liquefaction projects, the IEA predicts a long-term supply gap. LNG production from ageing facilities is expected to decline, while demand is expected to continue to rise.

Asia and Europe are driving demand growth. In Asia, manufacturing is expanding, cities are growing and electricity needs are increasing faster than domestic production can keep up. LNG has become a practical and flexible way to bridge that gap. Meanwhile, the ongoing war in Ukraine has forced the EU to rethink its dependence on Russian gas. The EU is now working to phase out Russian LNG by the end of this year and pipeline gas by September 2027, which opens the door for new suppliers to serve existing and future demand.

These shifts, combined with the rise of AI computing and the strong energy demand from datacentre build-out, reinforce the need for a robust LNG supply chain. Buyers' appetite for reliable, stable and cost-competitive LNG makes US natural gas and projects like ours increasingly attractive.

How has the regulatory and political environment changed over the past year, and to what extent has this supported Sempra Infrastructure's growth plans?

De la Vega: Over the past year, the regulatory and geopolitical environment has spurred US industry growth and underscored the critical role of US LNG in global energy security.

The second Trump administration's early decision to end the moratorium on new LNG export permits reignited the industry's momentum and created a path for our Port Arthur LNG Phase 2 project to receive final permitting approval and achieve a positive FID last year.

Across Europe and Asia, geopolitical factors have made energy security a top priority for buyers, and US LNG is widely seen as one of the most reliable options. Backed by ample gas supply, modern liquefaction technology and a transparent market, the US provides significant advantages on which global buyers increasingly rely.

These shifts have supported strong commercial growth opportunities across the industry and reinforced the need for projects like ours that can reliably deliver supplies to critical markets.

With increasing scrutiny on lifecycle emissions, how is Sempra Infrastructure integrating methane reduction, carbon intensity targets, and potential carbon capture into its LNG and gas infrastructure projects?

De la Vega: Sempra Infrastructure recognises that tackling methane emissions is important to global buyers. To address this, we have invested in improved detection and quantification methods and are implementing programmes designed to mitigate emissions and enhance operational efficiency.

We are developing carbon capture and sequestration technologies as part of our strategy to help reduce lifecycle emissions within the LNG value chain. As an example, the proposed Hackberry Carbon Sequestration (HCS) project in Louisiana is designed to capture CO_2 from Cameron LNG and potentially other industrial sources, to help LNG customers achieve lower carbon intensity. This project remains in the early stages of development.

Sempra Infrastructure marked a major milestone last year when HCS received its Class VI permit from the Louisiana Department of Energy and Natural Resources—the first issued in the state.

Through this project and similar initiatives, we are working to help ensure LNG remains a reliable lower-carbon solution for global energy needs.

New EU methane regulation is presenting some challenges for US and other LNG exporters. What is Sempra Infrastructure's view on how methane regulation can be shaped in a way that is pragmatic and feasible while still delivering results in terms of emission cuts?

De la Vega: Europe's growing demand for US LNG underscores the importance of regulatory frameworks that support the flow of reliable, competitively priced energy. With abundant natural gas reserves and access to export terminals, the US is positioned to provide a high level of supply security to Europe.

However, the existing EU Methane Regulation (EUMR) could impact this mutually beneficial trade. Unlike vertically integrated systems in some producing countries, the US value chain involves thousands of independent producers and value chain participants, making it difficult to identify the provenance of gas delivered to LNG export terminals. For the US to continue supplying Europe with the gas it needs, it is important that the EU finds clear compliance pathways to meet its energy security objectives that are workable within the US natural gas market, and that such compliance mechanisms are uniformly recognised by the competent authorities of EU member states. Close engagement between the EU, industry and other stakeholders will be essential to developing and adopting practical solutions that meet the goals of the EUMR while recognising the realities of the US energy system.

We welcome the European Commission's recent support for certification schemes to facilitate compliance and appreciate the EU's broader commitment to working with the US on these regulatory concerns. We look forward to continued collaboration with stakeholders.

What is Sempra Infrastructure's view on the outlook for natural gas demand in North America, particularly in light of the rise of datacentres?

De la Vega: We see a strong and durable outlook for North American natural gas demand, driven by rising LNG exports and growing power sector demand to serve datacentres and industrial loads.

Energy-intensive trends like AI and digitalisation are expected to be major contributors to future natural gas demand growth. However, this is not just a North American story. These trends are emerging globally and could increase natural gas demand across multiple regions. Asia, in particular, is poised for additional LNG demand growth as datacentre deployment accelerates.

This demand growth is supported by a sizeable resource base that positions the region to maintain adequate supply over the long term. The US Energy Information Administration estimates that the US alone has over 2,900tcf of technically recoverable natural gas resources.

And LNG can provide the flexible, dispatchable energy required to ensure the stability of global power systems and help meet this growing global demand. •

LNG: Looking Back and Ahead

Timera Energy's director of LNG and gas, David Duncan, walks us through the key trends that defined the global LNG market in 2025 and what to expect in the year ahead | **Joseph Murphy**

Looking back at 2025, what would you identify as the key trends in global LNG and gas markets, including any developments that proved unexpected?

Duncan: 2025 was the start of a multi-year LNG supply wave, led by rapid growth in North American liquefaction capacity. Global LNG loadings increased by around 30mt (7% year-on-year) in 2025, marking the first material step-up in global supply after several constrained years.

Europe absorbed the vast majority of incremental LNG supply, offsetting further losses of Russian pipeline gas as Ukrainian transit ceased, while also meeting strong storage refill requirements ahead of winter.

Asian competition for LNG was notably subdued, largely due to weak Chinese demand. A challenging macroeconomic backdrop, still elevated LNG prices, and continued growth in pipeline imports and domestic production squeezed LNG out of China's marginal gas supply mix.

A combination of weak Asian demand, stronger-than-expected European storage injections, the progressive ramp-up of new LNG supply, and ongoing macroeconomic softness underpinned a broad decline in global gas prices through 2025.

The correlation between gas and oil prices strengthened, reflecting gas–oil competition at the margin, particularly in the Asian industrial sector. Falling Brent prices reduced gas's competitiveness relative to oil in parts of the region, weighing further on gas prices.

The unexpected development was the sheer volume of LNG supply FIDs sanctioned during the year, which exceeded expectations and extended the upcoming supply wave into the early 2030s.

Henry Hub prices rose notably during the year, driven in part by stronger US power sector demand. How do you see US gas pricing evolving in the year ahead?

Duncan: Henry Hub strengthened in 2025 on rising power demand and on structurally higher levels of LNG feed-gas demand as new liquefaction capacity ramped up.

Looking ahead, three key upside risks could drive further increases in Henry Hub prices:

- Shale quality deterioration: declining quality of incremental shale resources could raise marginal production costs over time.
- Data centre-driven power demand: the rapid buildout of energy-intensive data centres requiring reliable baseload power is reinforcing gas demand for power generation across North America.
- LNG export growth: US LNG exports are set to increase by over 100mt/yr as part of the next supply wave, structurally tightening the domestic gas balance.

However, higher Henry Hub prices also increase downside risks for US LNG exports. If global LNG netback prices fall below the variable cost of US liquefaction, there is significant potential for cargo cancellations, with lique-

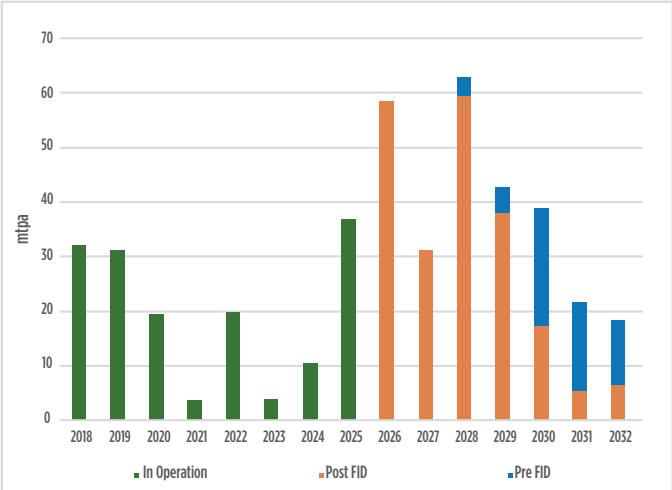

Fig.1: Projected global liquefaction capacity growth

LNG portfolio strategies are shifting. Rather than adding incremental US supply, portfolio players are increasingly focused on managing short US gas and long global gas exposures, especially across the 2027–32 window

faction capacity effectively shut in and export gas redirected back into the domestic market.

Any sustained rise in Henry Hub would therefore amplify the risk of marginal US shut-ins, particularly when considering that for US LNG to compete against coal in the Asian energy mix it will likely need to price well below $8/m Btu.

Reflecting these dynamics, LNG portfolio strategies are shifting. Rather than adding incremental US supply, portfolio players are increasingly focused on managing short US gas and long global gas exposures, especially across the 2027–32 window.

Participants long on global gas (JKM, DES NWE) but without corresponding short HH positions could benefit from asymmetric JKM price upside, driven by HH volatility when US LNG is at the margin.

Despite concerns about a looming wave of new supply from the US and Qatar, 2025 saw a strong pickup in LNG investment decisions. What is your outlook for FIDs in 2026—do you expect momentum to continue, or is a slowdown more likely?

Duncan: The strength of FIDs in 2025 reflected strategic positioning for a structurally larger LNG market, alongside heightened geopolitical considerations. In particular, US LNG's role as a negotiating lever in trade discussions reinforced its strategic value despite the approaching supply wave.

Looking ahead to 2026, further FIDs remain possible, but volumes are unlikely to match 2025 levels. Momentum is expected to slow as market participants pivot away from committing capital to new greenfield supply and toward managing existing positions through an impending market regime shift.

That said, selective investment is still expected to continue. Projects offering flexibility, diversification and portfolio optionality remain well positioned, particularly those able to provide contractual features such as diversion rights and cargo cancellation flexibility.

As a result, value creation is shifting away from a narrow focus on standalone intrinsic margins and toward projects and contracts with embedded optionality, where extrinsic value and broader portfolio benefits become increasingly important.

LNG charter rates dipped in early 2025 before rebounding sharply towards the end of the year. What were the main drivers behind this volatility, and what does it imply for shipping markets in the year ahead?

Duncan: Historically, charter rates follow a structural seasonal pattern, driven by strong winter LNG demand, particularly from Asia, which tightens the shipping market given longer voyages. Seasonality was especially pronounced during the energy-crisis tightness of 2021–23.

Across 2024–25, charter rates slumped and seasonality dampened due to:

- New vessel additions outpacing new LNG supply growth, in part due to commissioning delays of new liquefaction capacity.
- Voyage duration: strong post-crisis European LNG

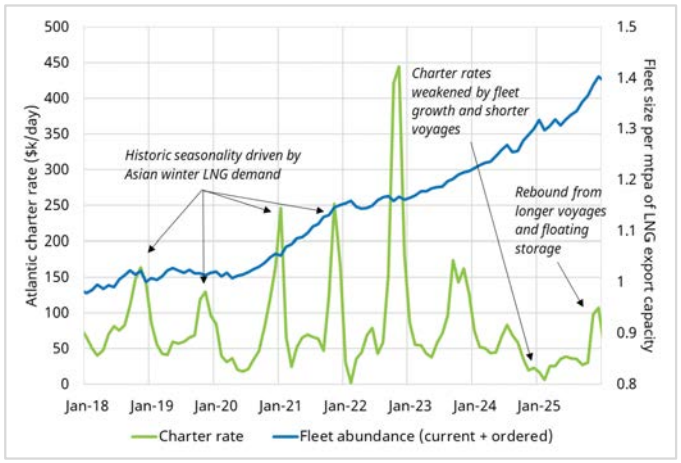

Fig.2: LNG carrier abundance vs charter rate

The unexpected development was the sheer volume of LNG supply FIDs sanctioned during the year, which exceeded expectations and extended the upcoming supply wave into the early 2030s

demand and weaker Asian demand have shortened average voyage times, freeing up capacity. Late-year rebound driven by winter demand, longer voyage durations, delays with unloadings and floating storage absorbing tonnage.

Going forward, our modelling projects rising average voyage duration, supporting a tightening shipping market into the late 2020s. A greater share of US Gulf Coast marginal cargoes flows to Asia as the supply wave is absorbed predominantly by Asia–consistent with longer voyages and wider Asia–Europe price spreads (JKM vs DES NWE).

As the LNG market grows and risk management advances, the key LNG shipping issues are focussing their attention on are:

- Investment in new vessels (market outlook, revenue forecast, contract review, and technical and policy considerations)
- Shipping strategy (fleet sizing, vessel specifications, etc.)
- LNG portfolio analytics (including shipping exposure and spot freight price volatility)

On a global basis, what are the key indicators to watch when assessing how the gas supply–demand balance may evolve in 2026?

Duncan: Liquefaction ramp-up rates and operational reliability will be critical. Even relatively small deviations from expected output can translate into large changes in market-clearing volumes, given the scale of new capacity entering the system.

The recovery, or continued weakness, of Asian gas demand in response to lower prices will be central to market rebalancing. Particular focus should be placed on evidence of Asian demand elasticity, as Asia is increasingly required to clear incremental LNG supply in a context of reduced European system flexibility.

Broader commodity price dynamics, notably the evolution of Brent and Henry Hub prices, warrant close attention due to their influence on LNG netbacks, fuel-switching behaviour, and ultimately the global clearing price.

European LNG imports and storage trajectories provide an ongoing indicator of global market tightness. Early signals are often visible in cross-basin spreads relative to full diversion costs, including freight and variable liquefaction, which determine whether cargoes clear into Europe or Asia.

In an environment of persistent price volatility, how can companies best manage value and risk across their LNG portfolios?

Duncan: Persistent volatility materially increases the value of flexibility across assets, contracts and portfolios. Effective negotiation, valuation and active management of flex options play a central role in capturing upside while controlling downside risk.

LNG portfolio valuation, optimisation and hedging are becoming increasingly complex, driving greater investment in commercial and risk teams, supported by enhanced analytics, data and system capabilities.

Flexibility unlocks value. Rigid portfolios leave material value on the table and typically carry higher downside risk, particularly in low-margin environments where cancellation, diversion and timing optionality provide a critical buffer.

Valuation informs commercial strategy. A clear understanding the extrinsic value of optionality is central to origination and contract structuring. Whether negotiating SPA terms, regasification access or price reviews, stochastic flex valuation underpins more defendable commercial decisions.

Earnings variability is significant, reinforcing the importance of:

- A robust view on market fundamentals, particularly around the forward shape of global gas prices amid a new LNG supply wave.
- Proactive commercial risk mitigation, using indexation strategy, contract structuring and access flexibility to manage downside exposures. •

LNG Remains Frontrunner Among Low-Carbon Marine Fuels

LNG's technical maturity, availability and price, as well as regulation, have driven its rapid adoption as a marine fuel, yet its future in shipping will depend on energy transition policies and progress in cutting methane emissions and scaling bio- and synthetic LNG, according to Carlos Guerrero, global market leader for gas carriers at Bureau Veritas | **Joseph Murphy**

LNG has established itself as the dominant alternative marine fuel for the current decade, but its longer-term role will be shaped by regulation, fuel pricing and ongoing efforts to address associated methane emissions, Carlos Guerrero, global market leader for gas carriers at Bureau Veritas, told *Petroleum Economist*.

That balancing act makes the future of LNG in shipping difficult to pin down with precision. "Looking into the future, it's difficult to predict actually what is going to happen with all these energy transition scenarios and regulations, but judging from the newbuilding orders, LNG is currently the preferred alternative to oil fuels," Guerrero said.

One key point of regulatory uncertainty relates to the International Maritime Organization's (IMO's) Net-Zero Framework (NZF). In October 2025, participating IMO member states voted to defer a decision on adopting the NZF by at least one year.

Even so, LNG's position as a lower-carbon option for shipping is now well established. "LNG is proven as a valid solution as a marine fuel to decrease CO_2 emissions," Guerrero said. While still a fossil fuel, LNG is "the cleanest fossil fuel available" for use on board ships, and its technical maturity, availability and price advantage over alternatives such as ammonia, methanol or hydrogen continue to underpin its appeal.

These advantages have led to strong uptake of LNG as a fuel in newbuild orders, particularly for larger vessels. Guerrero said LNG had been selected as the fuel of choice for the majority of alternative-fuel ship orders, with containerships accounting for a significant share in recent years, according to several sources.

For the maritime sector, which is under pressure to reduce emissions while maintaining operational reliability, LNG's high level of technical readiness remains a decisive advantage.

The LNG bunkering outlook

Guerrero expects LNG to retain that status through the end of the decade. "For the next five years, until the end of this decade, LNG will be the preferred solution for the maritime industry," he said.

The growth in LNG-fuelled vessels is being matched by a steady expansion of bunkering infrastructure. More than 220 ports globally are now able to provide LNG as a bunker fuel, Guerrero said, and around 70 vessels worldwide are capable of delivering LNG via ship-to-ship bunkering.

Uptake is also supported by the ongoing expansion of the broader LNG market. Over 200mt of additional LNG supply is expected to come online globally between now and 2030, Guerrero said, reinforcing the availability advantage that underpins LNG's competitiveness as a marine fuel.

He also expects prices to remain supportive, despite any potential seasonal peak. Guerrero said he believes LNG prices will stay stable below $10/m Btu, potentially falling further, supported by a significant supply growth. Such pricing, he argued, would "also drive appetite from the maritime clients to go for this fuel".

LNG is proven as a valid solution as a marine fuel to decrease CO_2 emissions

The beauty of LNG as a fuel option on board a ship is that you can use the same installations for these two cleaner fuels, bio and e-LNG, without any modification

Despite the momentum, LNG bunkering remains a small part of the overall gas market. Currently, only around 1% of global LNG supply is used as marine fuel, equivalent to roughly 4mt/yr, Guerrero said. By the end of the decade, that figure could increase four- or five-fold.

"It's not crazy… to think that we will see in the next four or five years around 20mt of capacity already for LNG as a maritime fuel," he said, while stressing that forecasts are inherently uncertain given the interplay of technical, commercial and political factors.

One of the main constraints on faster deployment is cost. LNG-fuelled vessels require higher upfront capital expenditure than ships designed to run on conventional fuel oil, limiting adoption in some segments. Even so, Guerrero said large energy companies, LNG traders and other oil and gas players have been highly proactive in supporting the development of LNG bunkering, including through investments in dedicated bunkering vessels.

The methane slip issue

While LNG offers a clear CO_2 advantage over traditional marine fuels, methane emissions—and in particular methane slip from internal combustion engines—remain the most contentious issue surrounding its use.

"The industry is looking very seriously into methane emissions—not just on board the ship in terms of methane slip but also across the entire value chain of LNG," Guerrero said. Methane emissions are the "weak point" of LNG and the area under greatest scrutiny from stakeholders, including in the EU.

Recent technological progress has begun to address that concern. Over the past 1–2 years, engine manufacturers have introduced new solutions that significantly reduce methane slip, Guerrero said. In some cases, these technologies cut the volume of unburned methane by around half compared with earlier engine designs.

Further improvements are under development, including the potential use of catalytic reactors to reduce methane slip. Guerrero said such advances are being driven in part by regulation, notably the EU's FuelEU Maritime framework and the possible future adoption of an IMO net-zero framework.

IMO regulation itself has evolved, he added, moving towards more realistic approaches that incorporate testing under real operating conditions rather than relying solely on default emission factors. Classification societies, including Bureau Veritas, acting as recognised organisations, are already involved in certifying actual methane slip values for engines, helping to provide more accurate data for compliance and penalty calculations.

Future pathways

Looking beyond standard LNG, Guerrero sees bio-LNG and synthetic LNG (e-LNG) as critical future pathways that enhance the "future proofing" of LNG-fuelled ships.

"The beauty of LNG as a fuel option on board a ship is that you can use the same installations for these two cleaner fuels, bio and e-LNG, without any modification," he said. That drop-in capability offers shipowners flexibility and protects the higher capex associated with choosing the fuel.

Today, both bio-LNG and especially e-LNG remain expensive and limited in availability. But Guerrero expects costs to fall and supply to grow as technologies mature. Over time, he said, these fuels could potentially become cheaper to produce than other green alternatives, while retaining the same calorific value as conventional LNG.

A drawback is that burning bio-LNG or e-LNG still produces CO_2, because the underlying molecule remains methane. For the shipping sector to make further reductions in emissions, Guerrero said carbon capture solutions could eventually be deployed on board vessels to address tank-to-wake emissions.

Such options are still at an early stage, but they form part of a broader portfolio of decarbonisation pathways under consideration across heavy industry, including shipping.

Guerrero emphasised that flexibility is central to navigating the transition. Moving from standard LNG to bio-LNG or e-LNG represents the "cheapest flexibility", he said, because no equipment changes are required. By contrast, a later shift to fuels such as green ammonia would involve costly retrofits to engines and fuel supply systems and potentially fuel containment.

Against a backdrop of evolving regulation and technological change, Guerrero expects LNG to remain a cornerstone of efforts to reduce shipping-related emissions through at least the end of the decade. For shipowners and investors, the appeal is pragmatic: LNG offers an immediately available and technically mature pathway to lower emissions, while keeping future options open in the form of bio-LNG and e-LNG. •

LNG Trends in Developing Economies

Awais Ali Butt, manager for sales and business development at Pakistan LNG Ltd, discusses LNG's role in energy security across developing, price-sensitive economies, as well as examining trade-offs between buying strategies and the impact of lower prices and policy on import behaviour | **Joseph Murphy**

How would you characterise the role of LNG in supporting energy security across gas-importing developing economies?

Butt: Energy security in gas-importing developing economies is less about absolute supply abundance and more about managed access under financial and infrastructure constraints. In this context, LNG plays a pragmatic role as a flexible, scalable and externally diversified source of gas, though it is not without risk.

From a market practitioner's perspective, LNG strengthens energy security primarily by decoupling supply from fixed geography. For economies facing declining domestic gas or limited pipeline gas optionality, LNG enables governments and utilities to diversify supply portfolios and sourcing strategies, especially with FSRU-based terminals. This flexibility is particularly valuable in systems where power demand is seasonal, industrial load is cyclical and renewable output is variable, allowing short-term balancing without long lead-time infrastructure commitments.

In many developing markets, LNG is initially introduced as a short-term stabilising solution to address immediate supply gaps, power shortages or fuel substitution needs. Over time, as infrastructure, contracting arrangements and dispatch practices mature, LNG often becomes a structural component of the energy mix. At that stage, energy security is no longer driven by LNG volumes alone, but by how effectively LNG is integrated alongside domestic resources, renewables and system flexibility.

In practice, LNG delivers the greatest energy-security value when it is managed as part of a portfolio strategy including power generation, rather than a standalone solution. Long-term contracts typically anchor essential demand, while shorter-term procurement provides flexibility. However, system resilience ultimately depends on downstream governance—adequate storage, regasification redundancy and disciplined dispatch. Energy security, therefore, is achieved not merely by importing LNG, but by integrating it coherently within a diversified energy system.

How is LNG expected to evolve within the energy mix of price-sensitive, import-dependent markets over the longer term?

Butt: In price-sensitive, import-dependent markets, LNG is unlikely to evolve as a continuously expanding baseload fuel. Instead, its role is gradually shifting towards flexibility, reliability and risk management, shaped by affordability constraints and exposure to global price cycles.

As renewable capacity expands faster than grid flexibility, storage and demand-side response, gas plants supported by LNG provide dispatchable capacity during peak demand, seasonal variability and periods of low renewable output. In this configuration, LNG's value is measured less by annual throughput and more by its contribution to system reliability.

Affordability considerations will strongly influence how LNG demand evolves. LNG enhances physical availability of gas, but it also exposes buyers to global price volatility and foreign-exchange risk. In tight market conditions, this exposure can rapidly translate into demand curtailment, forced fuel switching or payment stress across the value chain. As a result, LNG demand in these markets tends to be cyclical and price-responsive, expanding when prices are benign and contracting when global markets tighten.

This dynamic is already reshaping procurement and infrastructure choices. Many developing markets are moving away from rigid, high-utilisation models towards flexible contracting structures and modular infrastructure, allowing LNG intake to adjust with demand and price signals. The emphasis is increasingly on limiting fixed-cost exposure rather than maximising import volumes.

Over time, LNG is therefore likely to remain a supporting pillar rather than a dominant fuel in price-sensitive markets. Its long-term relevance will depend on how well it is aligned with fiscal capacity, demand variability and renewable integration. Where LNG is procured and dispatched with discipline, it can continue to play a stabilising role; where it is over-contracted or misaligned with affordability constraints, its role will naturally diminish.

What are the trade-offs between long-term LNG contracting and spot procurement for emerging market buyers, particularly in volatile price environments?

Butt: For emerging market buyers, the choice between long-term LNG contracts and spot procurement is fundamentally a risk management decision, not a binary preference.

Long-term contracts provide supply certainty and planning stability, anchoring essential demand and reducing exposure to short-term market disruptions. They are particularly valuable during periods of global tightness, when spot availability becomes unreliable or prohibitively expensive. However, these contracts also introduce rigidity. Fixed volume commitments and take-or-pay obligations can create financial stress if demand underperforms or system utilisation declines, leaving buyers physically secure but fiscally exposed.

Spot and short-term procurement offer operational flexibility. They allow buyers to adjust volumes in line with demand, capture value during oversupplied markets and avoid long-term balance-sheet commitments. The trade-off is exposure to extreme price volatility. In tight markets, heavy reliance on spot procurement can lead to demand destruction, forced fuel switching or supply insecurity, directly undermining system reliability.

In volatile price environments, neither approach is sufficient on its own. Over-contracting transfers risk to public finances, while over-reliance on spot markets transfers risk to system security. Most emerging buyers therefore gravitate towards a layered procurement strategy—using long-term contracts to cover baseload demand, supplemented by short-term and spot purchases for flexibility and seasonal balancing.

Ultimately, the effectiveness of this approach depends less on the contract mix itself and more on how exposure to price, volume and fiscal risk is actively managed. Buyers that maintain balance and flexibility are better positioned to navigate volatility; those that do not tend to oscillate between financial stress and supply insecurity.

In many developing markets, LNG is initially introduced as a short-term stabilising solution to address immediate supply gaps, power shortages or fuel substitution needs. Over time, as infrastructure, contracting arrangements and dispatch practices mature, LNG often becomes a structural component of the energy mix

With LNG prices expected to ease over the coming years, how might this influence demand behaviour and import patterns in affordability-constrained markets?

Butt: In affordability constrained markets, easing LNG prices are likely to result in a measured and selective demand response, rather than a sharp expansion in consumption. Lower prices typically allow some previously suppressed demand to return, particularly in the power sector, where gas-fired generation becomes more competitive against oil-based alternatives.

However, in many developing economies, downstream prices for end-consumers are already administered or subsidised, meaning that lower LNG import costs do not automatically translate into higher demand. In the absence of structural tariff reforms or market liberalisation, easing LNG prices primarily reduce the fiscal burden on governments and utilities, rather than materially stimulating incremental consumption.

As a result, demand behaviour remains highly price- and risk-sensitive. Buyers tend to respond cautiously, especially following recent periods of extreme volatility. Instead of locking in higher volumes, utilities and aggregators are more likely to rebuild imports gradually, prioritising flexibility and cost control over scale.

Easing prices may also influence procurement patterns. Buyers are likely to increase participation in spot and short-term markets where infrastructure is underutilised, while selectively using periods of lower prices to rebalance portfolios and improve supply visibility. However, this does not imply a structural shift towards higher LNG dependence.

Overall, easing LNG prices are more likely to restore optionality and financial breathing space than drive sustained demand growth. In affordability-constrained markets, LNG imports will continue to expand or contract in line with fiscal headroom, price signals and system requirements, rather than through automatic downstream demand expansion.

What types of policy or regulatory frameworks are commonly used by governments to enable LNG adoption?

Butt: Governments seeking to enable LNG adoption in import-dependent and developing markets typically focus on managing affordability, risk allocation and system reliability, rather than maximising volumes. Regulatory frameworks therefore tend to cluster around a few practical pillars.

First, pricing and cost-recovery mechanisms are central. Transparent pass-through frameworks are often combined with targeted subsidies or cross-subsidisation to shield vulnerable consumers and avoid abrupt fiscal shocks. The emphasis is on predictability rather than full price liberalisation.

Second, infrastructure and access regulation play a key role. Open-access regimes for regasification terminals and pipelines are used to improve utilisation and reduce unit costs, while licensing frameworks increasingly favour flexible solutions—such as modular terminals or floating regasification units—to limit long-term capacity risk.

Third, power-sector alignment is critical. Dispatch rules, capacity payments and grid codes are designed to recognise the reliability and firming value of gas-fired generation, allowing LNG-backed plants to support system stability without requiring high utilisation.

Fourth, payment security arrangements are commonly employed to sustain supplier confidence. Escrow mechanisms, guarantees or structured payment waterfalls help manage counterparty risk and support bankable contracting.

Finally, risk-management and contingency frameworks—including strategic storage guidelines, curtailment protocols and prioritisation of critical loads—ensure LNG can be deployed during stress periods without destabilising the system.

Overall, LNG adoption is enabled not by a single policy tool but by coordinated regulation that balances supply security, affordability and fiscal discipline. Where this balance exists, LNG can be integrated sustainably; where it does not, adoption remains fragile. •

LNG2026: General Information

At LNG2026, we are committed to ensuring you have an enjoyable experience throughout this week. Please find below a few useful housekeeping guidelines:

Access to the Conference and Exhibition

Attendees will be asked to present government-issued photo ID at security every time they enter LNG2026. This can be in the form of a valid passport or a Qatar ID (QID) for residents.
Attendees are required to wear their badge AT ALL TIMES during LNG2026, including networking functions. Attendees will only be able to access the areas of the event included in their registration.

Dress Code

Business attire is requested for attendance at the Conference, Exhibition and all networking functions.

Download the Event App

The Event App is an essential tool to help you navigate the event and contains the programme for the week, speaker profiles, exhibition layout, networking features and much more.
For any questions on the Event App, our staff at the Event App Support Desks would be delighted to assist you. The desks are located in the Spider Area, Level 1 and the Registration Area in the Exhibition Foyer, Ground Level.
For any assistance, you can also email support@allintheloop.com.

Conference and Exhibition Refreshments

Morning coffee, lunch and afternoon tea are provided to all Conference delegates.
Kiosks are open in the Exhibition foyers for food and beverage purchases for exhibitors and trade visitors.

Prayer Rooms

Prayer rooms, male and female, are available in the Conference area located on Level 1, by the QNCC Spider Café.
Additional prayer rooms are also available on the Exhibition Mezzanine Level, Hospitality Suite 4 for female attendees and Hospitality Suite 7 for male attendees.

Accessibility

The QNCC is designed to ensure equal access for all attendees with limited mobility. If you require any assistance, please ask the Organisers.

Water Stations

Water fountains are available at your disposal throughout the venue.

Photography

Professional photographers are taking photos throughout the event. These images may be used in post-event reports and marketing collateral, and supplied to industry media. If you do not want your photo to be taken, please advise the photographer.

Media Centre and Press Conference Room

We have a dedicated Media Centre and Press Conference Room at the following locations:

- Room 105: Press Conference
- Room 106: Media Centre

For media and PR enquiries, please visit the Media Team at the Media Centre or contact the team at media@lng2026.com.

Delegate Gift Bag Collection

The Executive and Technical Delegate Gift Bag may be redeemed upon presentation of your registration badge at the Delegate Bag Collection Desk located on Ground Level, near Auditorium 2.

Emergency Procedures

In case of emergency, please follow the instructions given to you by security and venue staff.

Medical Support

The event is supported by onsite medical services, with professional healthcare teams and emergency response measures in place to ensure the well-being of all participants throughout the week. Our Medical Centre is located on Level 1, by the QNCC Spider Café.

Alshaymaa M. Al-Motawa
Medical Services
a_almotawa@qatarenergy.qa
+974 40134226

Manal A. Alyafei
EMT & Ambulance
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Cloakroom

Cloakrooms are located on:

- Ground Level–Conference Side
- Ground Level–Exhibition Side

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