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29TH WORLD GAS CONFERENCE

WGC2025

BEIJING, CHINA 19-23 MAY

TUESDAY 20 MAY 2025

07

TODAY'S HIGHLIGHTS

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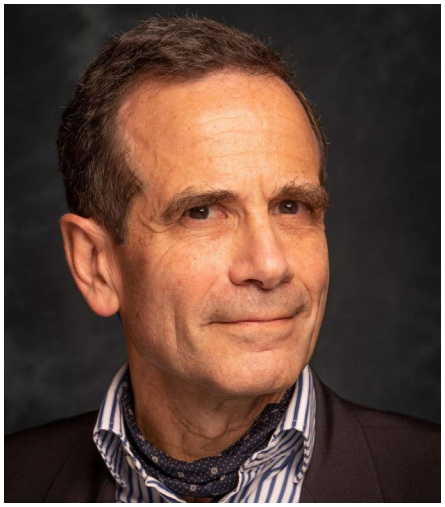


WELCOME MESSAGE FROM PRESIDENT, INTERNATIONAL GAS UNION

Welcome to the 29th World Gas Conference (*WGC2025*) in Beijing. It is a privilege to gather with esteemed industry leaders, experts, and innovators from across the globe as we delve into the future of gas in the energy transition. Over the course of this week, we will examine critical challenges and opportunities, shaping the future direction of our industry with thought leadership and collaboration.

WGC2025 presents a unique opportunity to connect with global leaders, government officials, and gas and energy companies for a week filled with insightful discussions, innovative ideas, and valuable networking. With over 80 sessions, and the largest exhibition in the event's history, this conference unites 3,000 delegates from 70 countries and regions, 300 exhibitors, and 30,000 trade visitors – all driven by a shared commitment to the future of the gas industry in the energy transition.

We warmly welcome you and invite you to engage in stimulating conversations on energy governance, sustainability, and technological advancements. Whether you are exploring the entire gas value chain or discovering cutting-edge innovations in new energy, *WGC2025* provides an exceptional platform to exchange ideas, build partnerships, and contribute to the shaping of our industry's future.

I look forward to meeting and speaking with you throughout the week as we embark on an inspiring and productive journey of collaboration and progress.

Li Yalan
President, International Gas Union

WELCOME MESSAGE FROM THE CHAIR, IGU COORDINATION COMMITTEE

It is my great pleasure to welcome you to *WGC2025* and introduce the carefully curated Conference Programme we have assembled. The sessions are designed to address the most pressing topics and transformative trends shaping the global gas and energy landscape, from decarbonisation and digitalisation to the integration of renewable gases and hydrogen.

This year's programme has been developed with a global perspective and industry relevance at its core. The insights shared over the course of this week will help set the direction for innovation, policy, and cross-sector collaboration, elements that are vital for a secure, and efficient energy transition.

I invite you to actively participate in the sessions, share your ideas, and learn from global best practices. Together, we can shape a more resilient and inclusive future for the gas industry.

Dr Yang Lei
Chair, International Gas Union Coordination Committee

WELCOME MESSAGE FROM THE CHAIR, NATIONAL ORGANISING COMMITTEE

I, as Chair of the *WGC2025* National Organising Committee (NOC), am honoured to invite all friends from China and abroad to the 29th World Gas Conference on 19-23 May 2025, in China National Convention Centre, Beijing, China.

We are delighted to have you here in Beijing for *WGC2025*. As the industry leaders from around the world gather for this one week, it presents a unique opportunity to exchange ideas and build connections that will influence the future of gas in the energy transition.

WGC2025 aims to expand its impact by integrating sectors such as new energy, finance, and technology, fostering industry collaboration and market growth. It will also serve as a platform for China to showcase its energy transition efforts, innovation, and industrial potential.

On behalf of the NOC, I invite you to this historical event, to expand the "circle of friends" at home and abroad, to create a shared future for low-carbon growth.

Cao Yujun
Chair, WGC2025 National Organising Committee

CONFERENCE OVERVIEW

Today marks the exciting beginning of our journey at *WGC2025*. The International Gas Union (IGU) and the National Organisation Committee (NOC) kick things off with the Opening Ceremony, welcoming delegates from around the world. This is where the future of energy unfolds, as we dive into the theme, Energising a Sustainable Future. Over the next few days, we'll explore this vision in Plenary, Current Debates, Industry Insights, and Technical & Innovation Sessions.

Make the most of your time here — plan your conference, schedule, connect with global leaders, and seize the opportunity to discuss potential deals, reconnect with past connections, and forge new ones. This is the place to get the latest insights and shape the future of the gas and energy industry.

BADGE COLLECTION TIME & LOCATION

Your delegate badge is required to access the venue and all official *WGC2025* sessions and events.

BADGE REGISTRATION DESK:

First Floor, Exhibition Area A Foyer (Gate 7), CNCC II, Tianchen East Road, Chaoyang District, Beijing.

Tuesday 20 May 2025:	07:30– 17:00
Wednesday 21 May 2025:	08:00–17:00
Thursday 22 May 2025:	08:00–20:30
Friday 23 May 2025:	08:00–12:00

WHAT TO BRING FOR BADGE COLLECTION

Individual Registrations:

Please present one of the following:

- Proof of registration (downloaded from "My Dashboard" on the *WGC2025* website).
- Your registration QR code - if you haven't saved it beforehand, simply scan the onsite QR code to retrieve it when picking up your badge.
- Passport or valid ID card.

Group Registrations:

Please present one of the following:

- Group proof of registration (from group account's "My Dashboard" on the *WGC2025* website).
- Your registration QR code - if you haven't saved it beforehand, simply scan the onsite QR code to retrieve it when picking up your badge.

Exhibitors:

- Exhibition Confirmation Letter (all badges under a company must be collected at the same time by the exhibitor representative).

WGC2025 EVENT APP

Download and login to the *WGC2025* Event App for the most up-to-date details of the *WGC2025* programme and a detailed description of the sessions and speakers.

The *WGC2025* Event App will be an essential tool to help navigate the event. The App contains the programme for the week, the speakers, floorplan, and so much more.

HOW TO GET STARTED

Step 1: Download the Event App

Scan or click the QR code to download the app from the App Store, Google Play or search *WGC2025* and download the App.

Download on the App Store

GET IT ON Google Play

Step 2: Log in

Please use your Registration User ID and Password which you created when you registered to *WGC2025* and log in to the Event App.

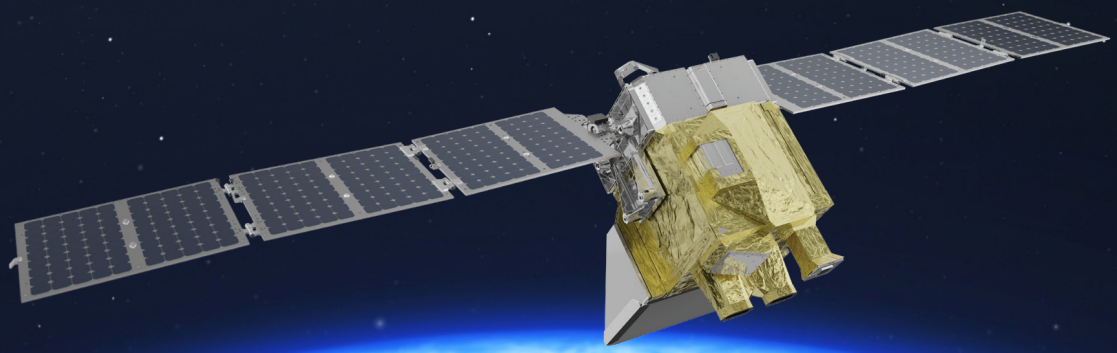
Key features available

- Browse the full conference programme.
- Explore speaker profiles.
- View exhibitor & sponsor info.
- Get key event info — floorplan, shuttle times and more.

If you require help or advice with regards to the App, please speak to our staff at the Information Desk in the Foyer of Exhibition A (L1) and the Foyer of Exhibition B (L1) will be happy to help.

The future of energy depends on methane mitigation.

能源的未来取决于甲烷减排



Try the methane detection experience.

体验甲烷检测

Hall B: W37

MethaneSAT™

BROUGHT TO YOU BY Environmental Defense Fund

TODAY'S HIGHLIGHTS

The *WGC2025* Exhibition will open its doors for trade visitors and delegates today.

All exhibition visitors will receive an exclusive access to this dynamic meeting place of conference delegates, policy makers, trade visitors and fellow exhibitors.

Exhibition opening times	
Tuesday 20 May 2025:	09:00–17:30
Wednesday 21 May 2025:	09:00–17:30
Thursday 22 May 2025:	09:00–17:30
Friday 23 May 2025:	09:00–14:00

OPENING CEREMONY

The wait is over — today marks the thrilling opening of the premier global gas conference. The International Gas Union and the National Organising Committee are kicking off an unforgettable week at CNCC. Get ready for inspiring speeches from top government leaders and

industry experts as they welcome you to Beijing and set the stage for an action-packed week ahead. Don't miss out and join us today for an exciting start to this landmark event.

Date: Tuesday 20 May 2025
Time: 09:00
Location: Banquet Hall on Level 3, CNCC II

If you haven't collected your badge, make sure to arrive early to collect your badge and attend the Opening Ceremony.

PROGRAMME HIGHLIGHTS: A POWERFUL START TO WGC2025

WGC2025 officially kicks off today with an exciting lineup of thought-provoking discussions and high-profile sessions centred around our theme, **Energising a Sustainable Future**.

PLENARY SESSIONS & KEYNOTE SPEECHES | L3 BALLROOM

- **PL01: Energising a Sustainable Future (10:30–11:15)**
  Featuring: Tengku Muhammad Taufik, President and Group CEO of PETRONAS; Patrick Pouyanné, Chairman of the Board and CEO of TotalEnergies SE; Meg O'Neill, CEO & MD, Woodside Energy and moderated by Michael Stoppard, Senior Advisor and Global Gas Strategy Lead of S&P Global

- **PL02: The Energy Policy Landscape (11:15–12:00)**
  Featuring: Fu Chengyu, Chairman, Renewable Energy and Net Zero Council; Charles Riedl, Executive Director, Center for LNG, Vice President, Natural Gas Supply Association; Rt. Hon. Ekperikpe Ekpo Ph.D, Minister of State Petroleum Resources(Gas), Federal Republic of Nigeria; Angela Wilkinson, Secretary General & CEO, World Energy Council and moderated by Robert Johnston, Executive Director of Research Center on Global Energy Policy at Columbia University

AFTERNOON SESSIONS

- **Leadership Dialogue:** He Zhongwen, President, China Oil and Gas Pipeline Network Corporation (PipeChina) and moderated by David Sandalow, Inaugural Fellow, Center on Global Energy Policy of Columbia University

- **PL03: The Global Energy Transition (13:45–15:00)**
  Featuring: Kirk Johnson, Senior Vice President, Global Operations, ConocoPhillips; Cristian Signoretto, Director Global Gas & LNG Portfolio, Eni; Peter Clarke, Head of Global LNG, ExxonMobil; Cederic Cremers, President Integrated Gas, Shell and moderated by Edmund Crooks, Vice Chair for the Americas Region, Wood Mackenzie

- **Technology & Innovation Centre Sessions**
  TI02: Best Practice Innovations Across the Gas Value Chain (15:15–16:00)
  Featuring: Weng Dingwei, Director at Research Institute of Petroleum Exploration & Development (RIPED), CNPC; Chen Mai, Engineer at RIPED, CNPC; Renaud Ledevehat, Head of Offshore Early Engagement & Gas to Power at Technip Energies; Ma Sheng, Executive Deputy General Manager at BG Beidou Technology Investment Co., Ltd and moderated by Frank Dietzsch, Head of Regulatory Framework Gas Technologies and Energy Systems at DVGW e.V.

- **Industry Insights — II01: Climate Sensitivity, Investment Strategies, and Sustainability Efforts in Upstream Oil and Gas Activities Alongside Net-Zero Commitments (15:30–17:00)**
  Featuring: Faye Gerard, Energy Transition and Americas Director at International Association of Oil & Gas Producers; Debo Fagbami, Chief Operating Officer at Xenergi Limited; Cheng Ziyun, Senior Engineer at Research Institute of Petroleum Exploration & Development (RIPED), CNPC; Wang Xiaolin, Ph.D & Senior Engineer at RIPED, CNPC; Yin Xiantong, Senior Mudlogging Engineer at Daqing Drilling & Exploration Geological Logging Company

The speakers may be adjusted based on onsite developments.

TOMORROW'S TOP HIGHLIGHTS

We begin the morning by addressing the theme of this conference, followed by examining and discussing the future landscape of the gas industry and how technology and innovation can assist companies and organisations in achieving it's net-zero goals.

- **PL04 — The Diversity of Gas Development Globally**
  Time: 09:00–10:15
  Leadership Dialogue Moderator: Michael Stoppard, Senior Advisor and Global Gas Strategy Lead**,** S&P Global
  Leadership Dialogue Speaker: H. E. Saad Sherida Al-Kaabi, Minister of State for Energy Affairs of the State of Qatar, President & CEO of QatarEnergy
  Panellists: Jack Fusco, President & CEO, Cheniere; Philip Mshelbila, Managing Director and Chief Executive Officer, Nigeria LNG Limited; Peter Wong, Managing Director, Hong Kong and China Gas Company Limited, Executive Director and Chief Executive Officer, Towngas Smart Energy Company Limited and moderated by Andrea Stegher, Senior Advisor, Snam, Vice President - IGU

- **CD11 — Navigating Global Gas Price Volatility**
  Time: 11:45–12:30
  Speakers: Zhu Yanyan, GM Trading and Commodities Center, CNOOC Gas and Power Group; Helen Currie, Chief Economist, ConocoPhillips; Gulmira Rzayeva, Senior Visiting Research Fellow, Oxford Institute for Energy Studies (OIES) and moderated by Li Yao, Founder & CEO, SIA Energy

- **TI07: Innovative Technologies to Decarbonate Industrial Processes and Gas to Power Production**
  Time: 14:15–15:00
  Speakers: Ghady Abou Rached, Research Engineer – Expert in Thermodynamic Systems, ENGIE Lab CRIGEN; Slawomir Pietrasz, Senior Project Manager & Optimisation Expert, ENGIE Lab CRIGEN; Vincent Hartanto, Research Engineer, ENGIE; Damien Nguyen, CTO, Wison New Energies and moderated by Stephane Hody, Project Leader of GRDF

- **II12: Detecting and Mitigating Methane Emissions: the Path to Net-Zero**
  Time: 15:30-17:00
  Speakers: Jolinde van de graaf, Program Manager, Shell Global Solutions International B.V.; Zineb KAHLERRAS, Teacher Researcher, Algerian Petroleum Institute - SONATRACH; Hassan Al Bulushi, Senior Production Engineer, Oman LNG; Julio Turizzo, General Manager of Natural Gas Transportation, Promigas SA ESP; Donglai Xie, Senior Scientist, Environmental Defense Fund; Meriem BRAIK, Teacher Researcher, Algerian Petroleum Institute - SONATRACH and moderated by Dennis Van Puyvelde, Head of Renewable Gas, Energy Networks Australia.

The speakers may be adjusted based on onsite developments.

PROGRAMME OVERVIEW

TUESDAY 20 MAY 2025

07:30–17:00	**Registration**
09:00–10:00	**Opening Ceremony**
10:00–10:30	Coffee Break
10:30 – 11:15	**Plenary** • PL01 — Energising a Sustainable Future
11:15 – 12:00	**Plenary** • PL02 — The Energy Policy Landscape
12:15–12:30	**Exhibition Opening Ceremony**
12:30–13:45	Lunchtime
13:45–15:00	**Plenary** • PL03 — The Global Energy Transition
14:15–15:00	**Technology & Innovation Centre Sessions** • TI01: Integration of Renewable Gas in Distribution Grids
15:00–15:30	Coffee Break
15:15–16:00	**Technology & Innovation Centre Sessions** • TI02: Best Practice Innovations Across the Gas Value Chain
15:30–17:00	**Industry Insights** • II01: Climate Sensitivity, Investment Strategies, and Sustainability Efforts in Upstream Oil and Gas Activities Alongside Net-Zero Commitments • II02: Asset Repurposing for the Transmission of New Vectors • II03: Energy Integration for Building the Future and Clean Mobility • II04: The Role of Renewable Gases and Hydrogen in the Energy Transition • II05: Case Studies of Regional Gas Pricing • II06: Global Gas Markets in Transition: Balancing Growth, Flexibility, and Decarbonisation • II07: LNG, the Shortest Route to Achieve Carbon-Neutrality Goals • II08: Best Practices in Communication of Gas Companies and International Organisations • II09: Industry Dynamics - Key Insights from IGU Committees and Task Forces Triennium Work Report
16:15–17:00	**Technology & Innovation Centre Sessions** • TI03: Technology Perspectives for Methane Emission Reduction

WEDNESDAY 21 MAY 2025

09:00–10:15	**Plenary** • PL04 — The Diversity of Gas Development Globally
09:15–10:00	**Technology & Innovation Centre Sessions** • TI04: Green Gases in the Infrastructure - What Is Needed to Get It Flowing
10:15–10:45	Coffee Break
10:15–11:00	**Technology & Innovation Centre Sessions** • TI05: Innovating for Resilience: Technology-Driven Solutions in a Transforming Global Gas Landscape
10:45–11:30	**Current Debates** • CD01: Building a Resilient Energy System • CD02: Addressing the Energy Trilemma • CD03: China's Natural Gas Development Prospects • CD04: Accelerating the Mitigation of Methane Emissions through Collaboration • CD05: Challenges and Opportunities for the Infrastructure of the Natural Gas Industry • CD06: Investing in Low and Zero Carbon Technologies • CD07: AI as an Accelerator for the Digital and Intelligent Transformation of the Natural Gas Industry • CD08: LNG Market Outlook and Investment Prospects
11:15–12:00	**Technology & Innovation Centre Sessions** • TI06: Advancements in Hydrogen Technologies
11:45–12:30	**Current Debates** • CD09: Opportunities and Challenges of Hydrogen Energy • CD10: Energy and Climate Policy Shaping a Low-Carbon Energy Future • CD11: Navigating Global Gas Price Volatility • CD12: The Future of Corporate Positioning in LNG • CD13: Gas in Europe: The Role of Natural Gas in Accelerating the Energy Transition • CD14: Development of Smart Energy Systems • CD15: "Natural Gas + CCS/CCU" as a Feasible Solution to Achieving Decarbonisation Goals • CD16: Global Gas Pricing - Key Findings of Wholesale Gas Price Survey 2025 Edition
12:30–13:45	Lunchtime
13:45–15:00	**Plenary** • PL05 — The New Financial Directions of the Energy Industry

14:15–15:00	**Technology & Innovation Centre Sessions** • TI07: Innovative Technologies to Decarbonate Industrial Processes and Gas to Power Production
15:00–15:30	Coffee Break
15:15–16:00	**Technology & Innovation Centre Sessions** • TI08: E-Methane: the Drop-in Innovation
15:30–17:00	**Industry Insights** • II10: Future of Underground Gas Storage • II11: Mitigating Methane Emissions in Distribution System • II12: Detecting and Mitigating Methane Emissions: the Path to Net-Zero • II13: Environmental and Climate Change Policy: Effects on Global Gas Demand and Supply • II14: Evolving Dynamics of Gas Pricing and Market Reform in the Asia-Pacific: Pathways to Convergence and Sustainability • II15: Today and the Future of LNG • II16: Think Different, Communicate Better • II17: Green Gas Certificates: A Key Tool for Carbon Neutrality • II18: Chinese City Gas Industry Leaders Dialogue
16:15–17:00	**Technology & Innovation Centre Sessions** • TI09: The Dynamic Communication Approach in the Natural Gas Industry

THURSDAY 22 MAY 2025

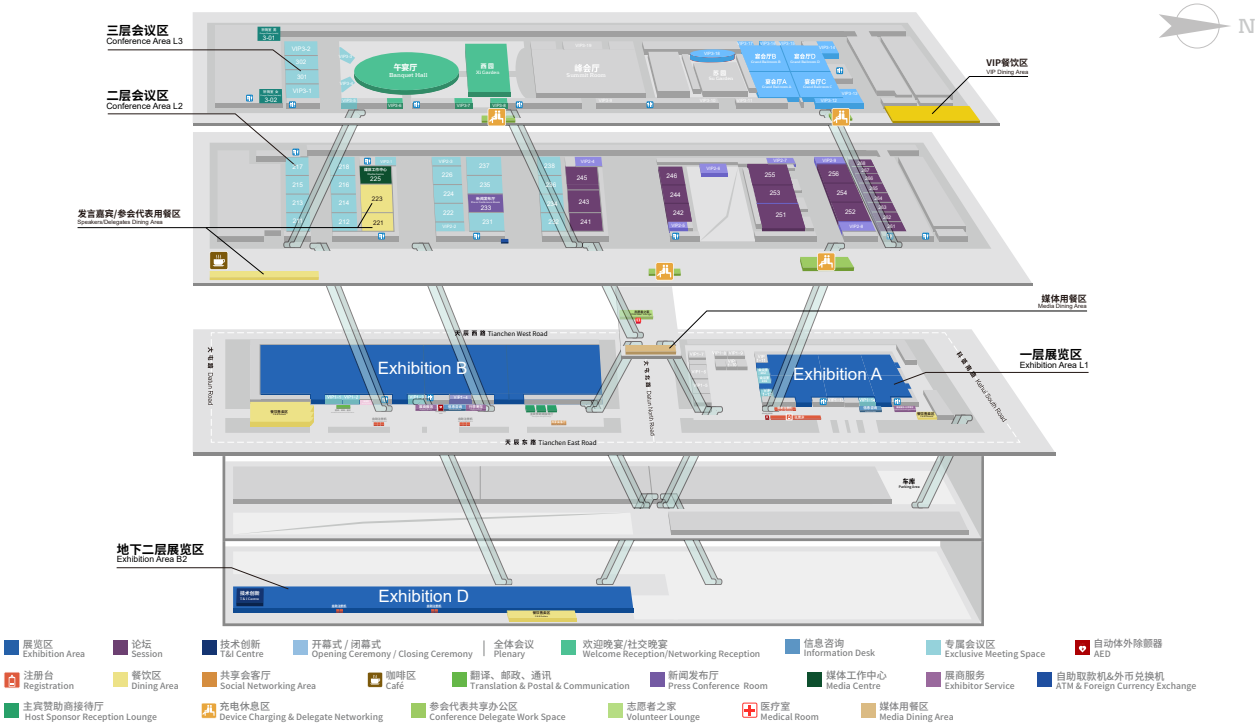
09:00–10:15	**Plenary** PL06 — What is the Future of Global LNG?
09:15–10:00	**Technology & Innovation Centre Sessions** TI10: "Megabytes to Molecules" - Digital Transformation of Natural Gas E&P
10:15–10:45	Coffee Break
10:15–11:00	**Technology & Innovation Centre Sessions** TI11: Advanced Technologies Along with the LNG Value Chains
10:45–11:30	**Current Debates** CD17: ls It Time to Develop a Unified Global LNG Trading Model? CD18: How ESG Regulations and Policies Guide the Sustainability of the Gas Industry CD19: LNG Shipbuilding and LNG Transportation CD20: The Future of New Gases CD21: Gas in the Americas: Unlocking Market Potential CD22: Natural Gas Enabling a Resilient, Secure, and Decarbonised Power System
11:45-12:30	**Current Debates** CD23: Natural Gas Pipeline Network Operations CD24: Gas in the Asia-Pacific: The Engine of Global Gas Growth CD25: The Construction, Operation, and Growth of LNG Terminals CD26: Gas in Africa: Natural Gas as an Ideal Choice CD27: The Continued Investment of Gas Infrastructure CD28: Global LNG Trends – 2025 World LNG Report Release
12:30–13:45	Lunchtime
12:30–13:40	**Luncheon: Women's Perspectives: Insights from Leaders in the Energy Industry**
13:45–15:00	**Plenary** PL07 — Digitalisation and Technological Innovation to Create a Sustainable Future
14:15–15:00	**Technology & Innovation Centre Sessions** TI12: Digital Twin: How the Digital Approach Enables Data Driven Decisions Along the Whole Gas Chain
15:00–15:30	Coffee Break
15:15–16:00	**Technology & Innovation Centre Sessions** TI13: Digital Transformation Examples with Gas Grid Operation
15:30–17:00	**Industry Insights** II19: Advanced Technologies and Innovation That Address Complex Challenges for Effective Exploration and Production Operations II20: Underground Gas Storage: Innovations, Challenges, and Sustainability II21: Guidelines and Strategies for the Integrity of the Physical Transmission Grid and the Security of the Virtual Network II22: Natural Gas and Renewable Gases Solutions: Best Vectors for Energy Efficiency and Energy Transition to Decarbonate Industries & Gas to Power II23: Innovative Solutions for ESG Excellence in the Gas Sector II24: LNG Supply and Demand Dynamics II25: Security of Supply: Lessons Learned II26: IGU New Triennium Work Plan Release
18:30–21:00	**Networking Reception - Italian Night**

FRIDAY 23 MAY 2025

09:00–09:45	**Current Debates** CD29: Technological Innovation for Safe Operations of Gas Distribution CD30: Balancing Supply and Demand Between Gas Importing and Exporting Countries CD31: Exploring the Role of Natural Gas in Clean Energy Transition CD32: Higher Education Empowers Sustainable Gas Futures
09:45–10:00	**Coffee Break**
10:00–11:00	**Plenary** PL08 — The Role of Natural Gas in the Future Energy Systems
11:00–11:15	Coffee Break
11:15–12:30	**Closing Ceremony**

The programme is subject to change and may be adjusted based on onsite developments.

WGC2025 FLOORPLAN



TECHNICAL TOURS

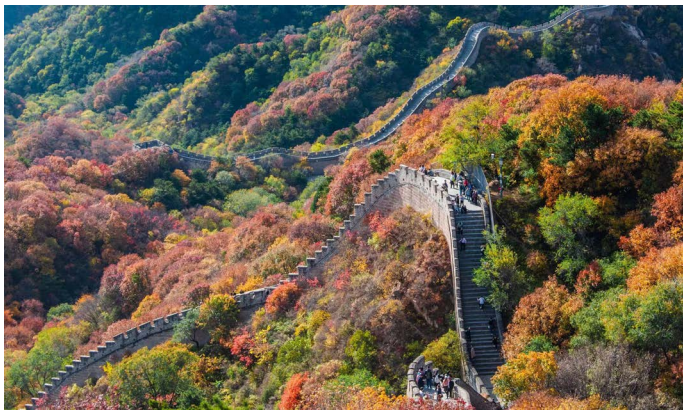
WGC2025 offers two technical tours for delegates to explore cutting-edge facilities and gain insights into the latest advancements in the gas and energy sectors.

Beijing Gas Xiji Station — Explore the station's pivotal role in China's CNG and LNG industries and its vital contributions to powering Beijing's energy infrastructure.
Time: Thursday 22 May 2025 at 13:00
Meeting Point: Gates 6 and 7, CNCC II

Gaobeidian Reclaimed Water Plant, Huaneng Beijing Thermal Power Plant — See how Beijing's largest reclaimed water plant supports the city's urban and industrial needs, and visit the thermal power plant, which has the strongest power generation capacity in Beijing and a leading heating capacity in China.
Time: Thursday 22 May 2025 at 13:00
Meeting Point: Gates 6 and 7, CNCC II

CITY TOURS

WGC2025 has organised five exicting cultural tours exclusively for *WGC2025* delegates, offering a unique opportunity to explore the rich history and culture of this host city throughout the week. These tours require booking, so be sure to secure your spot in advance.



The Great Wall & Tai Chi Experience
Discover the timeless beauty of Juyongguan Pass, often called the "First Great Pass Under Heaven," is a historic stronghold of the Great Wall, surrounded by lush landscapes and rich cultural heritage.
In this serene setting, delegates will practice Tai Chi, an ancient martial art that embodies strength, balance, and mindfulness.

Guided by an expert and dressed in traditional attire, participants will experience the harmony of history, nature, and philosophy in an unforgettable way.
Time:
Monday 19 May (Morning —08:00)
Wednesday 21 May (Afternoon —13:00)
Friday 23 May (Afternoon —13:00)

Guided Tour on the Palace Museum
Explore the Palace Museum, one of the world's largest and best-preserved ancient wooden architectural complexes. Once home to

24 emperors, this UNESCO World Heritage Site offers a 4.5-hour in-depth tour, unveiling its imperial history, cultural heritage, and architectural artistry.

Time:

Wednesday 21 May (Afternoon —13:00)
Friday 23 May (Afternoon —13:00)

Beijing City Library and The Grand Canal Museum

Discover two of Beijing's newest cultural landmarks. The Beijing City Library combines tradition with innovation, featuring themed reading halls and China's largest library reading room. Nearby, the Grand Canal Museum brings the ancient waterway to life with interactive exhibits and striking architecture inspired by canal boats. Together, they offer a unique glimpse into China's cultural evolution.

Time:

Wednesday 21 May (Afternoon – 13:00)
Friday 23 May (Afternoon – 13:00)

Temple of Heaven

The Temple of Heaven, once known as the "Temple of Heaven and Earth," was a sacred site for Ming and Qing emperors, the Temple of Heaven is China's largest and best-preserved ancient sacrificial complex. This architectural masterpiece blends philosophy, history, and science, symbolising the nation's spiritual and cultural heritage — a timeless pursuit of harmony and innovation.

Time:

Wednesday 21 May (Afternoon – 13:00)
Friday 23 May (Afternoon - 13:00)

Shougang Park

Shougang Park, a striking symbol of industrial transformation, blends Olympic legacy with innovation. Once a steel mill, it's now a hub for culture, sports, and green development in western Beijing—home to Big Air Shougang and cutting-edge urban revitalisation.

Time:

Monday 19 May (Morning – 08:00 and Afternoon – 13:00)
Wednesday 21 May (Afternoon – 13:00)
Friday 23 May Afternoon – 13:00)

DISCOVER BEIJING: A CITY OF HISTORY, INNOVATION AND CULTURE

As you gather in Beijing, take time to explore this vibrant city, where ancient heritage meets cutting-edge technology. From iconic landmarks to artistic hubs and innovation centres, here are some must-visit sites during your stay:

1. Yongding Gate
Marking the southern end of Beijing's Central Axis, this grand Ming Dynasty gate played a key role in the city's history and aligns with iconic landmarks such as Tian'anmen Square and the Bell & Drum Towers.
Location: Yongdingmen Park, Dongcheng District

2. National Centre for the Performing Arts (NCPA)
This futuristic, titanium-domed venue, often called "The Giant Egg" hosts world-class operas, concerts, and theatre performances, blending art with architectural brilliance.
Location: 2 West Chang'an Avenue, Xicheng District

3. Capital Museum
Explore Beijing's rich history through captivating exhibitions and archaeological treasures in this modern museum. Admission is free with an ID or passport.
Location: 16 Fuxingmenwai Ave, Xicheng District

4. Zizhuyuan Park
Also known as Purple Bamboo Park, this tranquil oasis is filled with bamboo groves, charming pavilions, and peaceful lakes. Perfect for a morning walk or a boat ride.
Location: 35 Zhongguancun South Street, Haidian District

5. 798 Art District
A creative hotspot where industrial warehouses have transformed into galleries, street art spaces, and trendy cafés, making it a must-visit for contemporary art lovers.
Location: 2 Jiuxianqiao Rd, Chaoyang District

Enjoy your time exploring Beijing!

GENERAL INFORMATION

Housekeeping

At *WGC2025*, we are committed to making it an enjoyable experience throughout this week. Below are some useful housekeeping guidelines to ensure your visit is memorable and educational:

Access to the Conference and Exhibition

For initial badge collection for individual delegates, please have the Proof of registration or your registration QR code. If you haven't saved them beforehand, you can simply scan the onsite QR code to retrieve your personal QR code or show Passport or valid ID card for badge pick-up. Group Proof of registration or your registration QR code is required for group registrations and Exhibition Confirmation Letter is needed for exhibitors badge collection.

You'll be required to wear your badge at all times during *WGC2025*, including social functions. You'll only be able to access the areas of the event that match your participation type, as shown on your badge.

Shuttle Buses

Complimentary shuttle buses for conference delegates and exhibitors are provided between the official partner hotels and CNCC. Further details can be found on the *WGC2025* Official Website and the Event App.

Dress Code

Business attire is requested for attendance at the conference, exhibition, technical tours and all networking functions.

Download the Event App

The Event App is your essential guide to *WGC2025* with the full programme, speaker profiles, exhibition layout, and more all at your fingertips. If you have any questions, our team at the Information Desk in the Foyer of Exhibition A (L1) and the Foyer of Exhibition B (L1) will be happy to help.

Conference Refreshments

Morning tea, lunch and afternoon tea are provided to all conference delegates. Please see the times and locations in the event programme or on the *WGC2025* Event App. All conference delegates are reminded to wear their badge to access these areas. Bistros are open in both exhibition levels for food and beverage purchases for exhibitors and trade delegates. F&B Pop-ups will also be open for paid purchases, located in the northern part of Exhibition Area A's Foyer, the southern part of Exhibition Area B's Foyer and the outside of Exhibition Area D.

Charging Station

A Charging Lounge is located at Foyer of L2 and Foyer of L3.

Prayers Room

Both male and female prayer rooms are located at L3, 3-01 is for male and 3-02 is for female. Please refer to Directional Signage for further details.

Photography
The organisers of WGC have professional photographers taking photos throughout the event. These images may be used in post-event reports, case studies, marketing collateral and supplied to industry media. If you do not want your photo to be taken, please advise the photographer.

Media and PR Enquiries
For media and PR enquiries please visit the Media Team at the Media Centre, at 225.

Medical Support and Emergency Assistance
First Aid is located at L1M. In the event of an emergency, please adhere to the instructions provided by security personnel and venue staff.

Smoking Policy
The CNCC is a non-smoking venue. Attendees are requested not to smoke inside the building.

Luggage Storage
The Luggage Storage is located in the Foyer of Exhibition A and Foyer of Exhibition B. The Luggage Storage is available for storage of personal items only and cannot be used for the storage of event-related material. The organisers do not take responsibility for any lost or stolen items.

Social Media
Follow us on social media for event highlights and why not tag us when you post on social media

- LinkedIn: 29th World Gas Conference
- Facebook: 29th World Gas Conference
- Instagram: @wgc_2025
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CHENIERE TARGETS FURTHER GROWTH AMID RESILIENT EUROPEAN DEMAND, RISING ASIAN APPETITE

US LNG EXPORTER CHENIERE ENERGY HAS COME A LONG WAY IN THE LAST DECADE, CREDITING ITS SUCCESS TO A PIONEERING BUSINESS MODEL FOCUSED ON RELIABILITY AND FLEXIBILITY.

Top US LNG exporter Cheniere Energy expects continued growth as it prepares to approve two additional liquefaction trains this year, driven by steady European demand and rising Asian appetite, Executive Vice President and Chief Commercial Officer Anatol Feygin told the *WGC2025 Daily*.

Since shipping its first LNG export cargo in 2016, Cheniere has developed around 45mn tonnes/year of liquefaction capacity at its Corpus Christi and Sabine Pass facilities on the US Gulf Coast. It approved the construction of more than 10mn t/yr of additional capacity at Corpus Christi in 2022, with the first several new trains expected online in 2025. This year, it plans to take final investment decisions (FIDs) on two more Corpus Christi trains, with a combined capacity of over 3mn t/yr. Looking further ahead, it is developing an additional 20mn t/yr expansion at Sabine Pass, which it expects to sanction in phases beginning in 2026 or 2027.

Cheniere has maintained its growth over the years despite a shifting political and regulatory landscape in the US. The Biden administration faced industry backlash after it imposed a temporary pause on new approvals for LNG exports to non-FTA countries in January 2024. The restriction was lifted as part of the Trump administration's first-day executive orders, which form part of a broader effort to ease regulations and accelerate permitting for the oil and gas industry.

When the pause was first announced, Cheniere stated it would not materially affect the company's prospects. Given the evolving understanding of methane emissions, it would have been "irresponsible" for the Department of Energy to not conduct another study to assess whether LNG approvals were in the public interest, Feygin said.

Anatol Feygin
Executive Vice President/ Chief Commercial Officer of Cheniere Energy

"Policy stability, regulatory transparency and a legal framework that is navigable are all very important aspects, but that said, every step of our expansion has had challenges that we've had to navigate. There will always be challenges," he said. "Clearly, the current administration is much more supportive of our industry, and that is a tailwind rather than a headwind. But we've operated through five different administrations safely and reliably, and we'll be doing that with 15 more."

A PIONEERING BUSINESS MODEL

Cheniere credits its success to pioneering a US LNG business model focused on increased reliability and flexibility that essentially "disconnects the gas resource from the liquefaction process," Feygin said.

About 95% of Cheniere's LNG capacity is contracted under long-term agreements with take-or-pay conditions for liquefaction, meaning buyers commit to paying for liquefaction services rather than specific gas volumes.

"We control the process of gathering the molecules and getting them to our facilities – that was a very novel approach in the first few phases of the US liquefaction buildout," Feygin said. At the time, Cheniere's competitors operated as tolling facilities, with their capacity holders responsible for securing gas supply.

"We thought our model works better, more reliably and with greater operational flexibility – and our focus on safely and reliably operating the plants has created a business that, in almost a decade of operations, has never missed a foundation customer cargo," he said. "We treat our off-take agreements as sacrosanct. We bend over backwards, as do our customers, to ensure every cargo is delivered."

Cheniere continuously works to improve the safety, efficiency and reliability of its operations while also reducing emissions associated with its LNG production, he added.

The company purchases gas in the North American market, transports it to its liquefaction terminals, and then sells the LNG under different arrangements. Customers can purchase LNG on a free-on-board (FOB) basis or opt for Cheniere to handle shipping under a delivered-at-terminal contract. Under its integrated production marketing (IPM) agreements, Cheniere buys gas from North American producers at a global gas or LNG index price, minus a fixed liquefaction fee and other costs, before selling the resulting LNG on the global market and delivering it to end users.

A key aspect of Cheniere's commercial strategy is the absence of destination clauses in its contracts, allowing LNG to flow to the markets where it is most needed, Feygin said. This flexibility was crucial in supplying Europe during tight market conditions over the past three years.

"We thought our model works better, more reliably and with greater operational flexibility – and our focus on safely and reliably operating the plants has created a business that, in almost a decade of operations, has never missed a foundation customer cargo

Following the start of the Russia-Ukraine conflict in February 2022, nearly three-quarters of Cheniere's LNG was sent to Europe in 2022 and 2023 before dipping to around 55% in 2024. That share rebounded to 86% in January this year as the continent grappled with the loss of Russian gas transit through Ukraine, colder temperatures, and falling inventories.

At other times, Latin America and Africa have emerged as premium LNG markets, drawing more Cheniere cargoes, Feygin said.

LNG OUTLOOKS IN EUROPE AND ASIA

While Europe has traditionally not been viewed as a growth market for gas, Cheniere has generally had higher demand expectations for the region than official EU forecasts. European gas consumption has fallen in recent years due to high prices, but LNG demand has surged as buyers replace lost Russian pipeline supply.

Photo: ***The Sabine Pass liquefaction facility in Louisiana, US***
Source: Cheniere Energy

Photo: ***Three vessels at the Sabine Pass liquefaction facility in Louisiana, US***
Source: Cheniere Energy

"Europe has positioned itself well in terms of supply diversity," Feygin said, pointing to the rapid expansion of regasification and internal pipeline infrastructure since 2022. He dismissed concerns that new LNG terminals risk becoming stranded assets.

"They are relatively inexpensive and serve as an insurance policy in periods of major disruption – that's a lesson that Europe has learned, as well as Egypt, Argentina and many other countries," he said.

Of course, Asia remains the primary growth region for LNG.

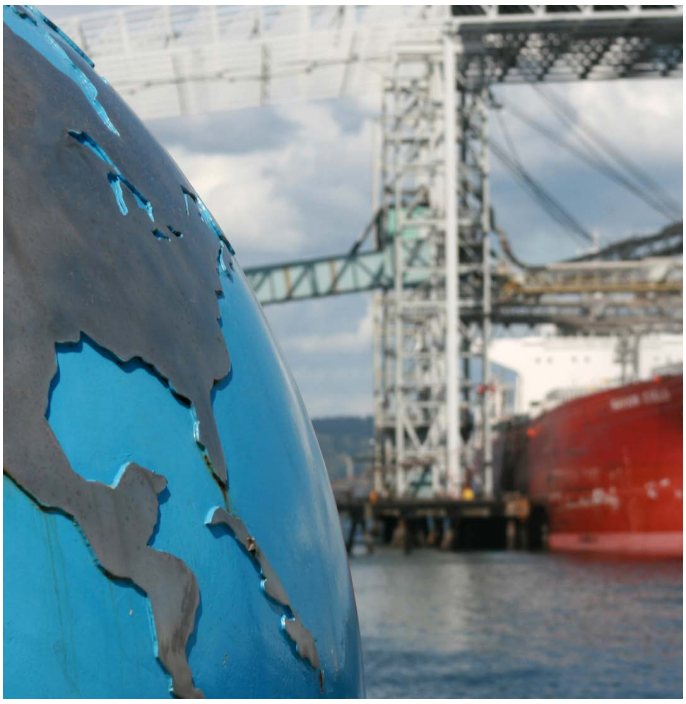
"In China, we're seeing a tremendous amount of investment in natural gas generation, storage capacity, regas terminals and other gas infrastructure," Feygin said. China added 22 GW of new gas-fired power capacity in 2024 – far below the 350 GW of new wind and solar capacity — but still significant for LNG demand.

While Chinese gas demand growth has slowed, the sheer size of the market ensures continued expansion opportunities.

Unlike infrastructure bottlenecks seen over the last decade, Feygin believes most regions in the world will be well-equipped moving forward to accommodate the expected rise in LNG supply. China's regasification capacity is set to reach 250mn t/yr by 2027-28. Given that its facilities ran at 200% utilisation in 2018-19 during periods of high demand, the country should be able to absorb significantly higher LNG imports than that capacity, he said.

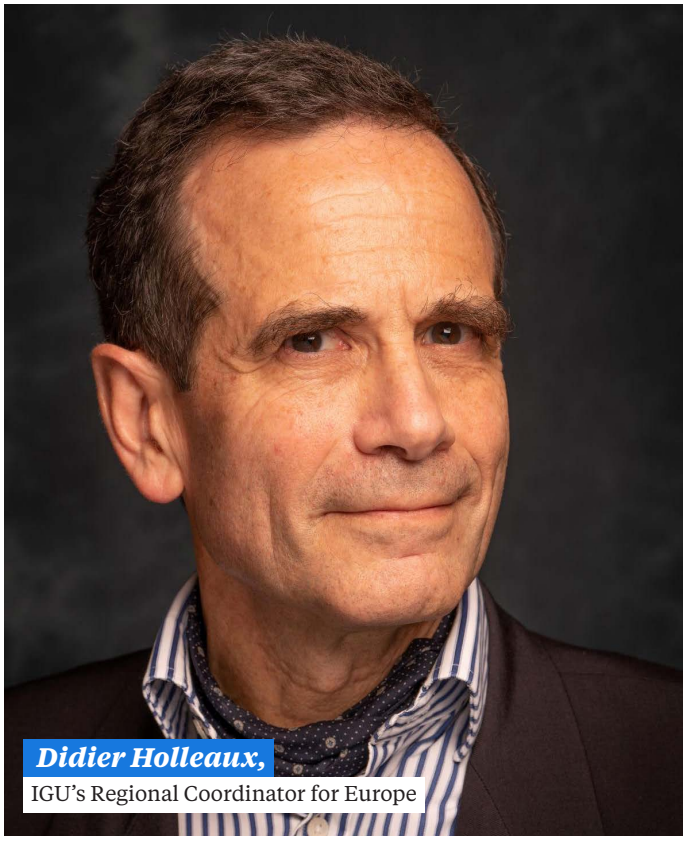
India is another major growth market. The country, now the world's most populous, still has a long way to go in fulfilling its plans to expand gas use. The government aims to connect 70% of its population to the gas grid and increase the share of gas in its energy mix from 6.2% to 15% by 2030. The International Energy Agency projected in February that India's gas demand would grow by 60% by 2030, requiring LNG imports to double.

Anatol Feygin, Executive Vice President & Chief Commercial Officer at Cheniere Energy, will be speaking at the session "Addressing the Energy Trilemma" at 10:45 on May 21. ■



VOLATILITY STILL REIGNS OVER EUROPE'S GAS MARKET

EUROPE'S GAS INDUSTRY CONTINUES TO STRUGGLE WITH PRICE VOLATILITY, BUT LONG-TERM SUPPLY CONTRACTS AND DIVERSIFIED PRICING COULD HELP ENSURE A MORE STABLE MARKET IN THE FUTURE, DIDIER HOLLEAUX, IGU'S REGIONAL COORDINATOR FOR EUROPE, TELLS WGC2025 DAILY.



Didier Holleaux,
IGU's Regional Coordinator for Europe

Europe is grappling with significantly higher and more volatile natural gas prices compared to last year, following the loss of Russian gas transit through Ukraine in early January and a colder late-winter period with weak wind generation. These factors accelerated gas withdrawals during the first months of the 2024/2025 winter.

Adding to these challenges, rigid EU gas storage targets are distorting the market, pushing summer futures prices above those for next winter. This has led to substantial reinjection costs that will likely require state subsidies, Didier Holleaux, IGU's Regional Coordinator for Europe, told the *WGC2025 Daily*.

The EU introduced storage targets in 2022, to make best use of its more than 100bn m^3 of storage capacity to guard against supply shortages that winter, given the risk of further Russian supply cuts. While this regulation proved effective, this year it has created market spikes. The negative summer-winter spread means companies must inject gas at high prices during the coming months and sell it at a loss next winter.

While supporting the target of reaching over 90% storage capacity by November 1, Holleaux argues for greater flexibility on interim targets set for each country for July 1 and September 1, to help companies manage costs. While some flexibility exists, national authorities are required to intervene if targets are missed by more than five percentage points.

"Leave it to us to decide at what time, at what pace, we want to fill up," he said, explaining that rigid targets drive up summer injection costs and may force governments to intervene, thus further distorting the market. Some sellers have also exploited the situation, as they can anticipate when and how much gas buyers will need for storage.

"Without flexibility, you are playing in the yard of the speculators," he said.

EU authorities and member states are currently working to reform the storage rules, to make them more flexible.

ATTRACTING MORE GAS

Holleaux expects Europe's gas market to remain tight until at least 2027, when a significant wave of new global LNG supply from Qatar and the US is expected to come online. Until then, the EU is pursuing multiple initiatives to secure cheaper gas, though with mixed results.

One such initiative, the AggregateEU platform, launched in 2023, was designed to facilitate joint gas procurement. However, it has functioned merely as a matchmaking service between buyers and suppliers and has failed to secure large new volumes and lower gas prices, Holleaux said.

He suggested that a genuine joint procurement mechanism, allowing bulk-buying of gas under long-term contracts at reduced prices, could be more effective. This aligns with recommendations made by former European Central Bank President Mario Draghi in his 2023 report on strengthening EU competitiveness.

However, long-term contracts have been discouraged by the European Commission's Directorate-General for Competition (DG Comp), which has previously imposed fines or forced contract revisions, citing violations of antitrust rules, state aid control and internal market policies.

"DG Comp should stop trying to prevent long-term gas contracts and recognise that they are in the general interest in the context of the Russia-Ukraine conflict." Holleaux said. He also called for EU authorities to prioritise their objectives : "You cannot at the same time ask for more supply and fight against your suppliers on destination clauses, sustainability due diligence and methane regulation."

Uncertainty over future gas demand in Europe also makes buyers reluctant to commit to long-term deals. The REPowerEU strategy forecasts a sharp decline in gas consumption, though it is unclear whether this will materialise. Further complicating the situation are EU regulations preventing new long-term contracts for unabated fossil gas beyond 2049 and a lack of clarity on how methane regulations will impact import contracts.

Holleaux advocated for contract pricing mechanisms that include a mix of indexes rather than relying solely on the EU's flagship TTF. He noted that much of the LNG exported from the US – the EU's largest LNG supplier – is priced at Henry Hub but is then sold in Europe based on the much higher TTF price. The same applies to Norwegian gas, produced at fixed costs and sold at a very high TTF indexed price. A more balanced approach using multiple indexes, including Brent oil, could provide greater price stability.

"This basket of indexes is worth considering, as diversification is the best way to reduce price risks," he said.

This reasoning contrasts with the EU's approach over much of the past two decades, during which it prioritised a market based on shorter-term contracts and spot trades linked to TTF while moving away from oil indexation and pricing tied to other gas hubs.

The EU is also considering investing in LNG projects abroad in a bid to secure more cheap supply, pursuing a model that was spearheaded by Japan. The plan would essentially prop up private investors by offering state-subsidised loans.

Holleaux sees limited interest in this proposal, arguing that a lack of capital was not the main reason proposed projects in places like the US were not going ahead. Instead, long-term contracts can ensure more gas that is developed heads to Europe, with mixed pricing beneficial to buyers.

US President Donald Trump's easing of regulations and restrictions on natural gas and LNG projects as part of his "Unleashing American Energy" agenda could help Europe's gas market, Holleaux said. But he also cautioned that sustained high domestic gas prices in the US could lead to industrial pressure to curb LNG exports at a later stage, posing a risk to European supply.

Holleaux highlighted biomethane as a more promising avenue for Europe's energy transition. He pointed to the sector's rapid growth, with biogas and biomethane production reaching 22bn m3 in 2023

DECARBONISATION

Trump's policies are also unlikely to impact efforts by US LNG exporters to cut methane emissions, as these initiatives are mostly driven by customer demand and reputational considerations. "A lot of the measures to reduce methane emissions pay for themselves anyway," he said, as gas that would otherwise have escaped into the atmosphere is instead sold or utilised.

On hydrogen, Holleaux expressed skepticism about the EU's plans to launch auctions later this year to procure hydrogen internationally, arguing that the market lacks sufficient impending supply.

"There is no hydrogen to be traded, so creating a platform to trade non-existent green hydrogen is not hardly a priority," he said.

He also cast doubt on the EU's 2030 hydrogen production target of 10mn tonnes/year, calling it unrealistic. The bloc produced less than 74,000 tonnes of clean hydrogen in 2023, meaning production would need to increase 135-fold to meet the target.

Eventually, the EU will have to revise its target, but the question is whether it will do so sooner or later, Holleaux said.

Conversely, Holleaux highlighted biomethane as a more promising avenue for Europe's energy transition. He pointed to the sector's rapid growth, with biogas and biomethane production reaching 22bn m^3 in 2023, according to the European Biogas Association, accounting for about 7% of the EU's natural gas consumption and equivalent to one-fifth of the Russian gas that Europe has lost since 2021.

"It is no longer a marginal sector; it's a significant producer of energy," he said.

He pointed to France's introduction of biomethane production certificates last year as a step toward creating a viable market for the fuel. Meanwhile, Denmark has exceeded 40% biomethane penetration in its gas grid, with expectations of reaching 100% by 2030.

At the World Gas Conference 2025 (*WGC2025*), Holleaux said he looked forward to discussions on the potential of green gases across the world, as more countries particularly with large agricultural sectors need to recognise and develop their untapped biogas and biomethane capacity. He also called for greater consensus on the future role of gas in the energy mix, noting that current projections diverge widely.

"We are caught between net zero scenarios on the one hand where you see a very rapid decline in natural gas with unanswered questions about how demand will fall so quickly, and business-as-usual scenarios where demand either plateaus or carries on increasing," he said. Narrowing that range of forecasts would help guide investment decisions and long-term contract negotiations.

Didier Holleaux is the IGU's Regional Coordinator for Europe. He is also Executive Vice President of ENGIE, and served as Chairman of the Eurogas Association from 2021 to 2024. He will be moderating the session "Gas in Europe: The Role of Natural Gas in Accelerating the Energy Transition" at 11:45 on May 21, and the session "Natural Gas Enabling a Resilient, Secure, and Decarbonised Power System" at 10:45 on May 22.

MIDOCEAN: THERE HAS BEEN A "SEA CHANGE" IN VIEWS ON LNG'S ROLE IN THE ENERGY TRANSITION

De la Rey Venter
CEO at MidOcean Energy

THE WORLD NOW RECOGNISES THE VALUE OF LNG AS AN ENABLER OF THE ENERGY TRANSITION AND ENERGY SECURITY OVER THE LONG TERM, CONTRARY TO THE PREVAILING NARRATIVE A FEW YEARS AGO, MIDOCEAN ENERGY CEO DE LA REY VENTER TELLS THE WGC2025 DAILY.

Global LNG supplier MidOcean Energy was founded three years ago with the conviction that natural gas, particularly LNG, would have a critical role in the long-term global energy mix, CEO De la Rey Venter told the *WGC2025 Daily*.

At that time, MidOcean was riding against the tide. The prevailing narrative in OECD countries, propagated by many forecasters including the International Energy Agency (IEA) was that LNG demand would start declining in the mid-2030s. The IEA had reached a controversial conclusion in its *Net Zero by 2050* report in the summer of 2021, that no further investment in gas was needed if the world was to remain on track to reach net zero emissions by mid-century. At that time, gas prices were already starting to rally significantly, in an early sign of the impending global energy crisis.

"There was this mistaken narrative that the golden age of gas was no more – that a wave of Paris-compliant policies around the world would snuff it out before it had really come about," Venter said.

"We felt so strongly that this stranded asset narrative was wrong, that we created a company that was positioned against that line of thinking."

This narrative led to far fewer final investment decisions (FIDs) on new supply projects, and less appetite among buyers for long-term contracts.

Midocean, on the other hand, was founded "on the belief that gas and LNG are absolute cornerstones of the long-term global energy system, and that the energy transition – in the real world and not in the make-believe world – would be anchored to gas in a very material way," Venter said.

The company was also confident that LNG would largely drive growth in the natural gas market. "Because if you look at where gas demand is growing and where the incremental gas supply is, you can only connect the two by ship and not by pipeline."

During the last few years, during which the world has suffered its worst energy crisis in living memory, there has been a "sea change" in attitudes towards natural gas and LNG, he said.

"The world is now a completely different place. LNG today is understood and appreciated, not only as a cornerstone of the energy transition, but also as a great enabler of energy security."

Momentum behind the sanctioning of new projects is now strong, and should get stronger following the Trump administration's lifting of a ban on the approval of LNG exports to non-FTA countries in January. During the year that the ban was in place, no new US LNG projects reached an FID. Long-term contracting is also "back in vogue," Venter said, even in Europe.

Some companies that had been in talks with MidOcean a few years ago to sell their LNG portfolios are now not only looking to hold onto those assets but grow their LNG business.

FOCUSING ON CASH FLOW AND DIVERSIFICATION

So far, MidOcean has focused on acquiring interests in quality operational assets to generate cash flow, purchasing 1-5% stakes in the Gorgon, Pluto and Queensland terminals in Australia in 2024, along with a 35% interest in Peru LNG. Moving forward, though, it will target new projects as well.

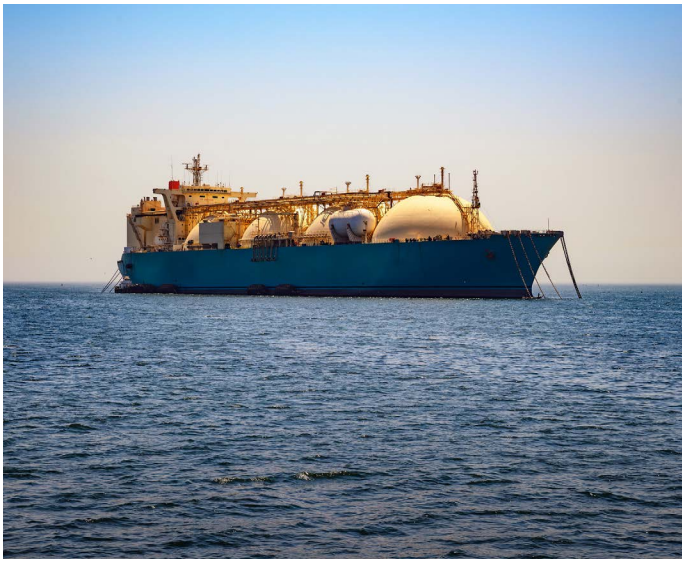
"When you start a company, the first thing you need is to build a cash flow foundation," Venter said, arguing that early investment in producing assets enables a firm to grow, raise equity, hire the right people and pursue new development opportunities.

"If the first thing you do is a new project, you're going to spend five years trying to get to FID and then another four years building the facility. That's nine years to first cash flow. And in the meantime, you have zero ability to grow and pursue other opportunities, because you don't have money," he said. "You are fragile unless you have cash flow coming in every month."

Outlining MidOcean's strategy, Venter said the company is building a diversified global supply and market footprint. "Diversification... brings with it built-in risk mitigation," he said, adding that resilience, in the form of low cash costs and carbon competitiveness are also central to the firm's approach. "Carbon emissions and carbon competitiveness will remain an important business driver."

MidOcean was formed and is managed by EIG, a private institutional investor focused on the global energy sector. But it has also brought on board Saudi Aramco and Japan's Mitsubishi as two of its anchor investors, giving the company access to deep technical expertise, extensive global networks, and strategic support, he said.

"We would all prefer the market to be in balance, well-supplied and stable, because over time that enables more demand growth. The tight market will pass as we near the end of the decade."



THE LNG OUTLOOK

The global LNG market remains tight, and while this may be good news for producers' profits in the short term, but long term is a different matter. "We would all prefer the market to be in balance, well-supplied and stable, because over time that enables more demand growth," Venter said. "The tight market will pass as we near the end of the decade."

He warned against price volatility. "The price of LNG doesn't have to go up and down like a yo-yo," he said, adding that this discourages prospective buyers. He expects to see more contracts designed to manage such volatility.

Shell forecasted in its latest outlook that global LNG demand would rise by around 60% by 2040, on the back of economic growth in Asia, emissions reductions in heavy industry and transport and the rise of artificial intelligence. MidOcean shares this bullish sentiment.

"I'm a believer that there's even more latent demand for LNG than that number," Venter said, with much of that demand depending on LNG being perceived as affordable and available at scale.

The concept of affordability evolves alongside economic development, he said. "What is considered affordable changes all the time," he said. As economies grow, particularly those with expanding service and manufacturing sectors, higher energy prices become more acceptable. "I do believe that [the] global LNG industry can continue to supply more new LNG at price points that will increasingly be considered affordable in the near term," he added.

AI will be a key factor influencing energy demand and LNG's relevance. AI drives up electricity demand while offering tools for cost reduction and increased energy efficiency. "AI plays a role everywhere... not just incremental demand for energy," Venter said, highlighting AI's impact on drilling efficiency, plant operations and energy system management.

The rise of data centres will drive energy demand growth, and not only in places like the US and China. Increasingly, countries will recognise the need to have their own data centres in-country, supporting their critical industries.

Venter noted that while a lot of attention is paid to the role of gas in the power sector, most gas is actually consumed in other sectors.

"Most gas demand growth is non-power... for example in the commercial sector, the continued substitution of liquid fuels in heavy industry, the growth as a transportation fuel in trucking and shipping."

These have been durable drivers of demand growth and will continue to be, particularly in China but also increasingly across South and Southeast Asia, including India, he said.

ENERGY POLICY MUST BE PRAGMATIC

Venter also called for pragmatic and stable energy policy that ensures affordability, security, and environmental performance. "Pragmatic energy policy is the thing that we were lacking in the last decade or so, and especially in Europe," Venter said. "Affordability, reliability, security and environmental performance are all equally important elements of the narrative... and gas plays to those four attributes like no other energy source."

Rising costs in the LNG midstream sector, particularly for new plant construction, are a concern, Venter acknowledged, but he is confident in the industry's ability to reduce unit costs over time. "We've seen that in the past as well... the industry finds ways to reduce the unit cost again."

Bringing LNG projects to fruition is always complicated, regardless of the policy environment. "Putting all the pieces of an LNG project together... has always been difficult. This has never been easy. LNG is the ultimate slow food," he said, noting that from conception to first cargo, a project can take 15 years.

Nonetheless, he believes it is easier to finance LNG projects today than two or three years ago, largely owing to the shift in policy narratives on LNG's long-term importance. Raising equity, particularly for newer companies, is a bigger challenge than securing debt financing, he said.

Venter looks forward to reconnecting with friends and industry partners at *WGC2025*. "LNG is such an incredibly networked world. When the LNG tribe gathers, we enjoy the friendships and partnerships that have been built over decades."

As a dynamic economy and the largest LNG market, China is an apt setting for dialogue on pragmatic energy policy. "A highly pragmatic approach to energy policy and energy market design has played out over the last couple of decades [in China], and I think it's a great setting to have exactly that debate and dialogue," he said.

De la Rey Venter, CEO of MidOcean Energy, will be speaking at the session Addressing the Energy Trilemma, at 10:45 on May 21. ■

Photo: ***The Pluto liquefaction terminal, Australia***
Source: Woodside Energy

GECF: GAS AN INTEGRAL PART OF THE FUTURE

"WE ARE CONVINCED NOW MORE THAN EVER THAT NATURAL GAS IS NOT JUST A BRIDGE TO THE FUTURE. IT IS AN INTEGRAL PART OF THE FUTURE," GECF SECRETARY GENERAL MOHAMED HAMEL SAID.

Mohamed Hamel
Secretary General of the GECF

According to the latest outlook report by the Gas Exporting Countries Forum (GECF), global demand for natural gas is projected to rise one third by mid-century, outpacing steady overall energy demand growth. As a result, natural gas is expected to account for 26% of the global primary energy mix by the mid-century, up from 23% in 2023.

GECF, whose 20 members from 4 continents account for nearly 70% of global proven natural gas reserves and 40% of marketed natural gas production and trade, expects gas demand to grow by 32% by 2050, reaching 5.317 trillion cubic metres (tcm) – a more bullish forecast than some made by other energy organisations.

Summarising the report's key findings, GECF Secretary General Mohamed Hamel stated that the world faces "an era of unprecedented uncertainty across geopolitical, economic, environmental, technological, and even societal dimensions." He cited "seismic shifts" in trade, energy and environmental policies, alongside evolving geopolitical dynamics.

"Energy security and affordability have emerged as dominant priorities, often taking precedence over sustainability concerns as nations grapple with the intricate realities of transforming a vast and interdependent energy system," Hamel said.

He added that the rapid development of artificial intelligence (AI) had introduced both disruptive challenges and opportunities, primarily due to the increasing power demands of energy-intensive data centres.

"Only a diverse energy mix tailored to the unique circumstances and priorities of individual countries, regions and cities can ensure a balance of energy security, affordability and sustainability," Hamel said. He noted that despite growth in renewables, global consumption of oil, gas, coal and even wood reached record highs in 2024, with gas accounting for 40% of incremental energy demand — the largest share among all fuels.

"We are convinced now more than ever that natural gas is not just a bridge to the future. It is an integral part of the future," Hamel said. "Natural gas remains indispensable for the transition from biomass to cleaner cooking fuels, switching from coal to gas, providing backup and stability to variable renewables, powering AI data centres, decarbonising transport and hard-to-abate industries and ensuring food security through fertiliser production."

While the GECF supports the expansion of renewable energy, it considers natural gas both a "partner" to renewables and the "foundation" of the global energy system for decades to come. Natural gas offers stability to complement intermittent renewable sources, helps displace coal, and plays a key role in promoting clean cooking and food security. The Forum advocates for an "all-of-the-above" energy strategy to meet growing demand, emphasising that there is no "one-size-fits-all" pathway for the energy transition—especially in the developing world, where diverse economic development levels and population growth trajectories shape national priorities.

MEETING GROWING ENERGY DEMAND

The GECF projects that global energy demand will rise by 18% between 2023 and 2050, with no sign of a peak in sight. The global population is forecast to increase by 21% to 9.8 billion, with more than 80% of that growth occurring in Africa and developing countries in the Asia-Pacific region. Urbanisation is expected to reach 68% by 2050, driven by the emergence of new megacities in Africa and Asia, which will fuel demand for housing, infrastructure, and services.

The global economy is expected to more than double in size by 2050, reaching $206 trillion, with over half of this growth originating from the Asia-Pacific region. Economic expansion in Africa, the Asia-Pacific region, and the Middle East is expected to outpace that in North America and Europe.

In GECF's alternative sustainable energy scenario, natural gas remains equally critical, with its share rising to 28% by 2050, driven by a faster phase-out of coal.

As a result, primary energy demand is expected to rise at an average annual rate of 0.6%, reaching 750 EJ by 2050, an 18% increase from 2023. Asia is projected to account for nearly half of global demand growth, while Africa is expected to contribute a quarter. Europe and North America are expected to experience slight declines, with North America reaching its peak in the late 2030s.

Natural gas is expected to play a key role in meeting this demand, with its share of the energy mix increasing from 23% in 2023 to 26% by 2050. Renewables are expected to be the fastest-growing energy source, growing to over 17% by mid-century. Oil demand is expected to continue rising until 2030, followed by a prolonged plateau, with coal's share declining from 27% to 12% by 2050.

As with energy demand growth, the rise in gas use will be led by the Asia-Pacific region, which is expected to account for 53% of the additional volumes by 2050, will see the fastest annual growth rate at 3%. North American demand will remain stable, but European consumption is expected to decline by more than 50% due to energy policies and deindustrialisation.

By sector, power generation is expected to drive 35% of the growth in natural gas demand, adding 475 billion cubic meters (bcm) by 2050. Transport will account for 21% or 265 bcm, though industry will remain the second-largest consumer after power. Natural gas used in hydrogen production — including blue and grey hydrogen — is expected to increase from 259 billion cubic meters (bcm) in 2023 to 480 bcm by 2050.

SUSTAINABLE ENERGY SCENARIO

In GECF's alternative sustainable energy scenario, natural gas remains equally critical, with its share rising to 28% by 2050, driven by a faster phase-out of coal.

"This pathway requires even more natural gas use," Hamel said.

The sustainable energy scenario assumes the reconciliation of climate change goals with economic empowerment on a global level, as explained by Abubakar Abbas, Senior Energy Forecast Analyst at GECF. In this scenario, global GDP grows at an annual rate of 2.9% rather than 2.5% in the reference case. There is an improved equality in per capita energy consumption and access, driven by average national income per capita reaching empowerment thresholds by 2050 in countries currently below this level in the model. In the residential sector of Sub-Saharan Africa, for example, the scenario envisions increased access to modern fuels, such as LPG, rather than the traditional biomass commonly used today. There is also a more significant mitigation of emissions from transport, where LNG can play a key role for trucks, buses, and vessels, as well as increased energy efficiency in the power sector through the development of modern combined-cycle gas turbine (CCGT) plants and rapid coal-to-gas switching.

"We see a huge opportunity where this coal-to-gas transition can allow significant carbon reduction," Abbas said.

In this scenario, the accelerated scale-up of CCUS—from megatonne to multi-gigatonne levels—plays a critical role in decarbonising the energy system, with a projected 7.2 gigatonnes of CO_2 equivalent captured over the forecast period.

"With the 1.5°C warming threshold fast approaching and the likelihood of overshooting increasing, rapid scaling up of CCUS—alongside Direct Air Capture (DAC) and nature-based solutions (NBS)—is essential for achieving negative emissions going forward," Abbas said.

In this scenario, total energy demand reaches 775 EJ by 2050 – 25 EJ higher than in the reference case.

PRODUCTION, TRADE AND INVESTMENT

North America is projected to remain the leading producer of natural gas by 2050, with output reaching 1.382 trillion cubic meters; however, its share of global supply is expected to decline from 31% in 2023 to 26%. Eurasia's share will rise from 21% to 23%, producing 1.208 tcm, while the Middle East's output will reach 1.155 tcm,

"In developing countries, particularly in Africa, natural gas is not merely an energy resource; it is a catalyst for growth, industrialisation, and enhanced prosperity. Ensuring access to natural gas is not just an economic necessity, but a moral obligation to lift people out of poverty."

expanding its share from 17% to 22%. Africa is expected to record the highest annual growth rate in gas production at 2.5%.

"The centre of gravity for natural gas supply is expected to shift to the Middle East, Eurasia and Africa by mid-century, accounting for nearly 90% of incremental natural gas production over the period of 2023 to 2050," Mustafa Adel Amer, Energy Technology Analysts, highlighted.

The GECF emphasised the need for substantial investment in gas production, as conventional existing assets are declining at a rate of 4% annually. More than 80% of the gas required in 2050 will come from fields yet to be discovered.

Natural gas demand continues to expand, and as conventional resources are depleted, there is an increasing reliance on greenfield developments and yet-to-be-discovered reserves. This trend underscores the rising need for sustained investment in the upstream sector to ensure energy security and market stability in the decades ahead, significantly beyond the current decade," Sabna Ali, Research Assistant at GECF, explained.

Cumulative investment in gas supply is projected to reach $11.1 trillion by 2050 across upstream and midstream sectors. Increasingly, capital will need to be directed toward complex, cost-intensive developments such as unconventional and deepwater fields. A third of the global supply will come from unconventional and yet-to-find resources, Ali said.

"The global gas outlook dispels the myth that natural gas investment can be halted," Hamel said. "In developing countries, particularly in Africa, natural gas is not merely an energy resource; it is a catalyst for growth, industrialisation, and enhanced prosperity. Ensuring access to natural gas is not just an economic necessity, but a moral obligation to lift people out of poverty."

Global natural gas trade is projected to grow by 44%, reaching 1.743 trillion cubic metres (tcm) by 2050. LNG is expected to take the lead, accounting for 63% of the international gas trade by mid-century. Over the outlook period, LNG volumes are set to double, reaching 800 million tonnes, reshaping global gas markets and introducing new dynamics. This shift will enhance market integration, flexibility, and overall efficiency.

This, in part, reflects a growing disconnect between where gas is produced and where it is consumed. Asia-Pacific and Europe will increasingly rely more on imported gas rather than their own.

Mustafa Amer, Energy Technology Analyst at GECF, and Sabna Ali, Research Assistant at GECF, will speak at the session "The Dynamic Communication Approach in the Natural Gas Industry" at 16:15 on May 21.

Abubakar Abbas, Senior Energy Forecast Analyst at the GECF's Energy Economics and Forecasting Department, will speak at the session "Gas in Africa: Natural Gas as an Ideal Choice" at 11:45 on May 22.

Adrian Sookhan, Gas Market Analyst at GECF, will speak at the session "LNG Supply and Demand Dynamics" at 15:30 on May 22. ■

LNG TO MAINTAIN KEY ROLE IN JAPAN'S ENERGY MIX THROUGH 2050 AND BEYOND

Satoshi Yoshida
Senior Advisor of the Japan Gas Association

JAPAN SEES LNG AS CRUCIAL TO ENSURING ENERGY SECURITY THROUGH THE ENERGY TRANSITION, WHILE PRIORITISING PROCUREMENT FROM SUPPLIERS WITH CLEAR DECARBONISATION STRATEGIES AND LEVERAGING ITS EXISTING NATURAL GAS INFRASTRUCTURE TO ADOPT E-METHANE AND OTHER LOW-CARBON GASEOUS FUELS IN THE FUTURE.

"The role of LNG in Japan's energy mix is crucial and will remain significant through 2050 and beyond," Satoshi Yoshida, Senior Advisor of the Japan Gas Association, told the *WGC2025 Daily*. While the country's LNG imports have declined in recent years, the country's 7th Energy Basic Plan, adopted by the government in February, positions the fuel as an essential energy source during the transition to a more sustainable future.

Japan's LNG imports currently stand at around 66mn tonnes, returning to pre-2011 levels before the Great Eastern Earthquake. "The sharp increase in LNG imports after 2011 was necessary to compensate for the loss of nuclear power generation," Yoshida explained. Thirteen years on, LNG's share in Japan's primary energy mix is only now returning to previous levels.

While Japan is committed to net-zero emissions by 2050 under the Paris Agreement, requiring reductions in both greenhouse gas (GHG) emissions and overall energy consumption, it remains focused on securing LNG imports, particularly from within the Asia region, to strengthen energy security. Yoshida stressed that LNG "will not only aid in GHG emission reduction but also enhance regional energy security."

Natural gas currently serves as the backbone of Japan's electricity system, accounting for 32.3% of power generation in 2023, according to the International Energy Agency (IEA), while coal in second place contributed 28.5%, and nuclear 8.5%. Lacking significant natural gas resources of its own, Japan relies on LNG imports to meet almost all of this consumption. Australia is by far Japan's top LNG supplier, leveraging its close geographical proximity to deliver over 40% of the country's supplies.

PROCUREMENT POLICY

Despite recent global supply constraints, Japan's LNG procurement strategy has remained largely unchanged over the last three years. Long-term contracts and diversified supply sources continue to be the pillars of its energy security policy. Japan has expanded supplier relationships and invested in upstream projects, while also pursuing more flexible contract terms, including renegotiating delivery and pricing conditions in long-term agreements. It also taps the spot market for additional cargoes to capitalise on temporary surpluses in global supply.

"I believe collaboration with neighboring countries to develop an LNG supply chain is vital for enhancing regional energy security."

An increasing share of Japan's LNG contracts now exclude destination clauses, granting procurement operators greater flexibility, Yoshida noted. He added that intergovernmental diplomacy is playing a key role in facilitating such contracts.

"I believe collaboration with neighboring countries to develop an LNG supply chain is vital for enhancing regional energy security," Yoshida said. "This includes working with Southeast Asian countries on joint investments in LNG infrastructure on both the supply and demand sides."

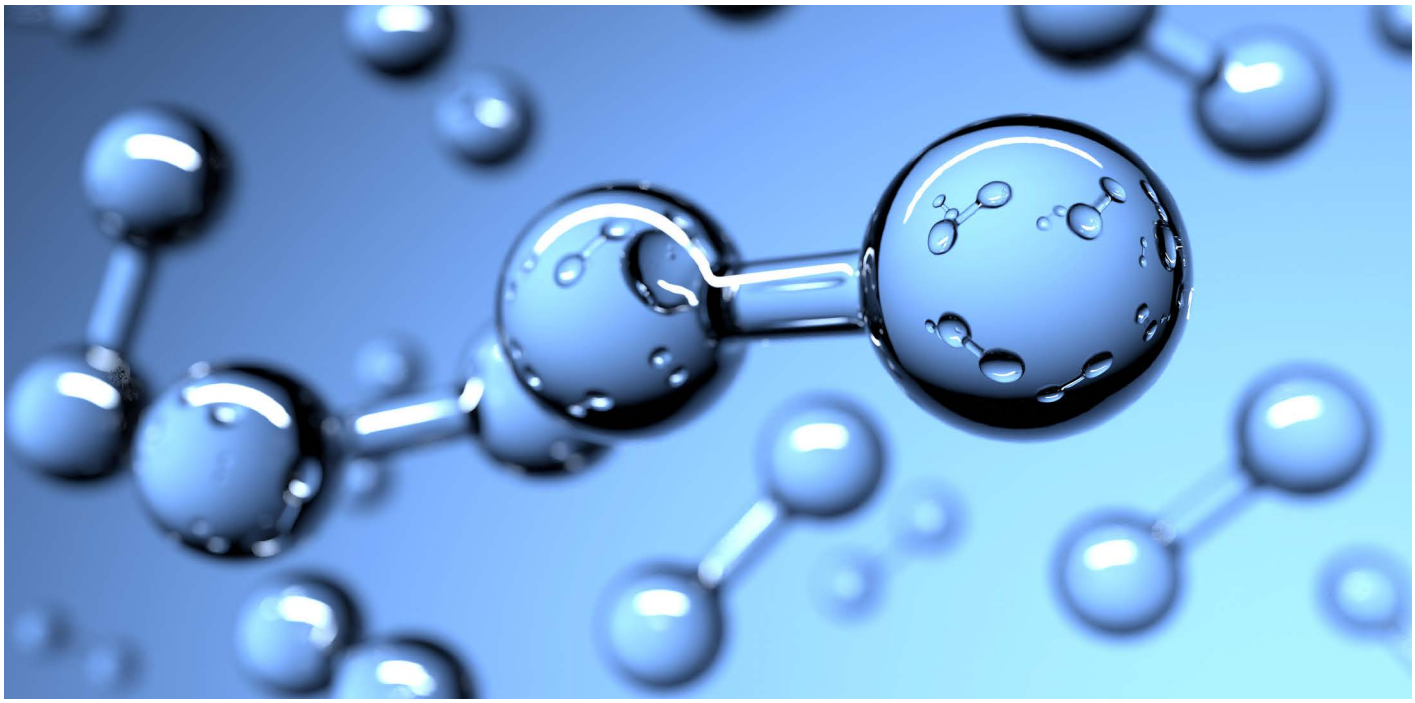
Japanese LNG importers are prioritising emissions reduction by sourcing fuel from suppliers with clear decarbonisation strategies across their supply chains, Yoshida said.

"Through supplier collaboration, investment in innovative technologies, life cycle assessments and contributions to carbon offset projects, importers aim to position themselves as responsible players in the transition to cleaner energy solutions," he said. "These efforts are crucial for shaping a more sustainable LNG import landscape."

NEW GAS PATHWAYS

Beyond purchasing low-emission LNG, gas companies are exploring e-methane to further reduce emissions associated with gaseous energy, Yoshida said. E-methane is produced from low-carbon hydrogen and CO_2 via electrolysis and methanation. It can utilise already accounted for CO_2 captured from industrial processes or directly from the atmosphere, using direct air capture (DAC) facilities, meaning that its combustion does not lead to any net increase in CO_2 emissions.

"E-methane facilitates a smooth transition by maximising the benefits of existing natural gas infrastructure," Yoshida said. "It is fully compatible with existing infrastructure, including gas pipelines, LNG carriers, storage facilities, and gas appliances, allowing for a seamless transition from fossil fuels to renewable sources."



The government, gas companies and stakeholders are collaborating to advance commercial e-methane technologies and establish GHG accounting rules. Japan's Strategic Energy Plan stresses the importance of innovative energy technologies to enhance energy security and support decarbonisation, including by integrating e-methane into the future energy mix. This requires developing frameworks for market development, pricing, and regulatory policies, to incentivise investment in e-methane production.

At the WGC2025, Yoshida looks forward to key discussions on the evolving landscape of the natural gas industry and its transition towards greater sustainability, through innovation

The city gas industry aims to substitute 90% of Japan's city gas with e-methane by 2050, with the first cargo expected to arrive in 2030. Several commercial projects are progressing toward final investment decisions, with the first shipments of e-methane anticipated by the end of the decade. And there are many pilot projects also underway globally.

Hydrogen, ammonia and regional carbon capture and storage (CCS) are also key elements in Japan's decarbonisation strategy. Power utilities are already introducing ammonia into coal-fired power plants to cut emissions. "While hydrogen is ideal for limiting on-site emissions, the market for direct hydrogen use is still limited, requiring the establishment of hydrogen infrastructure, appliances and safety regulations," Yoshida explained.

Hydrogen can also be utilised in the form of e-methane, which allows for faster adoption of hydrogen, given that the market and infrastructure for e-methane are already in place. Meanwhile, CCS remains a cornerstone of Japan's plan to reach carbon neutrality by 2050, with multiple demonstration projects already underway and aiming to scale up to commercial use.

WGC2025 DISCUSSIONS

At the World Gas Conference (WGC) 2025 in Beijing, Yoshida looks forward to key discussions on the evolving landscape of the natural gas industry and its transition towards greater sustainability, through innovation.

"Decarbonisation strategies will be a major focus, exploring how the natural gas sector can contribute to global decarbonisation goals, including strategies for reducing methane emissions and integrating gases such as e-methane, hydrogen and biogas into the energy mix," he said. "Market dynamics and economic trends will also be crucial topics, particularly discussions on global gas market volatility, supply chain resilience and strategies for stabilising prices amid geopolitical uncertainties."

He added that investment trends, the development of regulatory and policy frameworks, cross-border co-operation and technological innovation in the gas industry would also feature prominently at the event.

Satoshi Yoshida, Senior Adviser of the Japan Gas Association, will be speaking at the session "Energy and Climate Policy Shaping a Low-Carbon Energy Future," at 11:45 on May 21.

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