



# 2024

December

## A Year of Change: Reflections on 2024 and Priorities for 2025



CEO Roundtable White Paper

The Al-Attiyah Foundation



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The Al-Attiyah Foundation's fourth and final CEO Roundtable of the year took place on 4th December 2024. The moderator, Axel Threlfall, Editor-at-Large for Reuters, commenced with an update of events that he expected to influence the thoughts of the participants and direct the discussion. He mentioned Brent crude hitting a 2-week peak, no doubt influenced by events in South Korea, Syria, Ukraine and conflicts in Gaza and Lebanon, and pointed out that an Organization of the Petroleum Exporting Countries (OPEC) production decision was expected shortly. He then invited the His Excellency Dr Ibrahim Ibrahim, Vice Chairman of the Board of Trustees of the Al-Attiyah Foundation, to officially open the CEO dialogue.

## CEO WHITE PAPER

H.E. Abdullah bin Hamad Al-Attiyah created the Foundation as a platform for knowledge exchange and to support the global community in the quest towards a sustainable energy future.

The CEO Roundtable is an opportunity for CEOs, Foundation members and partners to meet in one room and examine pertinent energy and sustainable development topics.

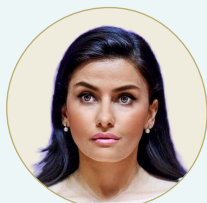


**Moderator:**

**Axel Threlfall,**  
Editor-at-Large at Reuters

**Speaker**

**Bill Farren-Price,**  
Senior Research Fellow  
and Head of Gas Research  
at the Oxford Institute for  
Energy Studies

**Speaker**

**Gulmira Rzayeva,**  
Senior Visiting Research  
Fellow at the Oxford  
Institute for Energy  
Studies (OIES)

**Speaker**

**Alan Gelder,**  
VP, Chemicals and  
Oil Markets at Wood  
Mackenzie

**Speaker**

**David Hart,**  
Partner at ERM and a  
Visiting Professor at  
Imperial College London

**Speaker**

**Marissa Lee,**  
Associate Director at  
Global Council

In His Excellency's opening remarks, Dr Ibrahim Ibrahim extended greetings to members, guests, and speakers gathered in the room and online.

He highlighted that 2024 has brought significant transformations across industries, economies, and energy markets, pointing out that it was a year during which we have seen an intensified push for in the energy transition, and increased activities in the area of green energy technologies. He observed that 2024 has shown the need for resilience, adaptability, and strategic vision in navigating a rapidly changing landscape. He concluded that, in preparing for the year 2025, the focus should not only be on responding to challenges but also on how to seize emerging opportunities.

Axel Threlfall introduced the five distinguished guest speakers and invited them to make some introductory remarks.

Marissa Lee, in her opening, noted that governments are increasingly adopting more populist stances on various issues. Regarding climate change and fuels, she highlighted that coal production has not declined. As a result, energy security has taken the "priority position" in the current energy trilemma, which she described as a clear reflection of populist policies. She observed that coal usage has risen in India, Indonesia, and Vietnam and posed a question to the audience: is coal co-driving the fuel transition?

Reflecting on 2024 United Nations Climate Change Conference (COP29), she stated that the outcome underscored the difficulty of achieving progress through multilateral frameworks. She predicted that bilateral trade agreements will play a more prominent role in addressing climate change expectations and commitments. However, the effects of unilateral measures, such as the EU's Carbon Border Adjustment Mechanism (CBAM), remain uncertain.



Looking ahead to 2025, she identified China as an emerging champion of the Global South, with its influence continuing to grow. She also noted that the possibility of a second Donald Trump presidency could lead to increased trade protectionism in the United States, further fragmenting and polarising the global landscape. While this polarisation could pose significant risks to international trade, she suggested that Asia might benefit from a more closed U.S. market by capitalising on reduced competition from imports.

Alan Gelder discussed his expectations for the next OPEC meeting. He noted that the organisation is facing several challenges, with oil prices drifting downward. Additional production volumes would further depress prices. He predicted that oil demand might grow modestly in 2025, by 1.00 to 1.50 MMBD, but supply is expected to increase slightly more than that.

He anticipates oil prices in 2025 will settle in the mid-\$70s unless OPEC increases volumes, which he considers unlikely. He also noted that refining margins are expected to remain tight in 2025. Very Large Crude Carriers (VLCCs) are being converted for distillate use, helping to efficiently balance interregional imbalances in refined products. He added that increased U.S. protectionism could likely lead to higher inflation in the U.S. and further depress oil prices.

Bill Farren-Price began his remarks by addressing the question he posed: "What does Europe look like now?" He highlighted evidence of some recovery in European industrial gas demand and suggested that the recent shift toward populism is bullish for gas demand, as pipeline projects may become more easily approved. He noted that Russian gas supply must improve, as it cannot deteriorate further.

New Liquefied Natural Gas (LNG) supplies are expected to start arriving in Europe in 2025, but markets are predicted to remain tight. Current price curves indicate there will be no discount for summer 2025 compared to winter 2024 gas prices, leaving no incentive to store gas for the next winter. While LNG imports are increasing, the decline in European gas supply has long been anticipated. He concluded by pointing out that gas demand is weather-sensitive, and a cold winter could lead to a peak in European demand.

Gulmira Rzayeva reflected on COP29. She emphasised that the headlines focused on funding, particularly the amount demanded by poorer and underdeveloped countries. She noted that the outcome of COP29 regarding finance should be considered historic, as it marked the first time the COP agreed on a single consolidated fund. The remaining question is how the agreed amount will be composed, whether through grants or loans. Despite some lingering uncertainty about the financial mechanisms, she highlighted notable progress in establishing a roadmap for the future. She also emphasised the breakthrough in finalising the rules related to Clauses 6.2 and 6.4 of the Paris Agreement. The agreements on these clauses will allow carbon offsets to be traded between countries and companies, potentially unlocking substantial funding from industrial buyers to carbon offset providers. Regarding Nationally Determined Contributions (NDCs), she observed that key announcements, particularly from Brazil and the UK, were made at COP29, which she believes will pave the way for further commitments from other nations.

David Hart focused his introductory remarks on the current hydrogen landscape, his area of expertise. He pointed out that hydrogen has a broad range of applications, with 1,572 projects currently underway worldwide. While he acknowledged challenges such as high interest rates, supply chain issues, and difficulties in scaling up equipment, he also noted several positives. Hydrogen can serve as an energy source, a storage medium, a means of removing sulphur or nitrogen from fossil fuels, or a precursor for producing other useful molecules. Hydrogen hubs are becoming increasingly important by connecting buyers and sellers, thereby enhancing economic viability. Both green and blue hydrogen are seeing growth. In China, hydrogen development is driven by security and industrial growth, while in the Middle East, differing political factors play a significant role.





After the introductory remarks and presentations by the guest speakers, the moderator opened the floor to other participants of the roundtable for comments, questions, and discussion. In the moderated discussion that ensued, the following issues were raised and discussed by the participants:

- The spotlight is on both blue and green hydrogen, but the debate continues regarding the relative rate of progress for each. Some capabilities for blue hydrogen already exist, while green hydrogen is expected to progress more slowly as it takes time to build up supply chains.
- In the US, uncertainty regarding the Trump administration may slow progress on climate change projects. New drilling leases, particularly on federal land, are anticipated. There is heightened debate about the impact of "tariff wars," with some imports to the US potentially facing restrictions, and LNG export projects could become "unfrozen." Trump may usher in a new era of relaxed climate change regulations, including the possibility of withdrawing from the Paris Agreement.
- On whether oil demand will peak in the next two decades, the general consensus around the table was that companies should focus on becoming more resilient and better able to adapt to change.
- There is evidence of delays in some renewable energy projects, leading to less robust growth than previously anticipated. However, investments in renewables are continuing, albeit at a slower pace.
- An interesting development is the accurate measurement of emissions. The industry is developing tools that could allow emissions to be quantified more precisely, keeping wider society well-informed.
- New oil developments are beginning to achieve zero emissions as updated guidelines are implemented in projects.
- Companies recognise the importance of strategising for the long-term, beyond the tenure of a single government administration.
- The global population will continue to grow, with an increasing number of people

requiring energy. Therefore, it is necessary to continue investing in oil and gas in a sustainable and environmentally responsible manner.

- The credibility of COP announcements is under serious scrutiny, as nations struggle to honour their commitments. For instance, at COP28, countries and observers hailed the inclusion of a text on phasing out fossil fuels in the final agreement as historic. Yet, a year later at COP29, the issue had gained little traction.
- Competition is expected to be the primary driver of progress, with the EU's Carbon Border Adjustment Mechanism anticipated to have a significant impact.
- Many countries are expected to make considerable progress in revising their Nationally Determined Contributions (NDCs) as the 2025 deadline for submitting new NDCs approaches.
- In the US, the Inflation Reduction Act (IRA) is driving numerous projects. Many local initiatives are benefiting from the IRA and its related regulations.
- There is a widespread belief that AI companies, backed by substantial financial resources, will drive future electricity demand. These companies are actively exploring all available options to address this growing need.
- OPEC faces a dilemma: balancing volume increases with price stability, particularly in light of rising EV sales and their potential impact on future oil demand.
- While China continues to show strong momentum in renewable energy adoption, progress in India remains comparatively sluggish.
- Carbon neutrality is a key ambition, achievable through CO2 capture, green hydrogen, and other advanced technologies. Employing green feedstocks and sustainable methods to produce eco-friendly products can significantly advance this goal. However, there remains resistance from customers to paying the associated green premium.
- Research initiatives in Qatar are focusing on Carbon Capture, Utilization, and Storage (CCUS), aviation fuels, biofuels, solar energy, and energy storage. Qatar continues to align its research projects with industry needs and applications.
- While battery technology continues to evolve and costs decline, there is broad recognition that batteries cannot solve every challenge.





The moderator invited participants to share their key takeaways from the discussion, which included:

- Diverse strategies for AI development among major tech companies.
- Delays in the energy transition due to ongoing uncertainties.
- Sluggish economic growth driven by political instability and debt challenges.
- Evolving security risks in a rapidly changing environment.
- While the transition has begun, its pace remains slow and nonlinear, particularly for non-conventional players. High-quality projects are likely to outpace others, emphasising the need for companies to remain agile and adapt to continuous change.

## CONCLUSIONS

In closing the discussion, Axel Threlfall extended his gratitude to all speakers and participants for their thoughtful contributions. He acknowledged the significant uncertainties that lie ahead, noting that the future appears both unpredictable and, to some extent, daunting.

H.E. Dr Ibrahim Ibrahim, in his closing address, thanked all participants, especially those speakers joining virtually across various time zones, for their dedication and incisive insights. He also expressed his heartfelt thanks to the Foundation's esteemed member companies for their steadfast support and invaluable contributions.

He emphasised that their commitment is crucial in driving the Foundation's mission forward and facilitating meaningful dialogue on key issues impacting industry leaders, policymakers, and society as a whole.





## European Gas Market Winter Outlook

**Al-Attayah Foundation CEO Roundtable Meeting  
4 December 2024, Doha**

**Bill Farren-Price  
Head of Gas Research, OIES**

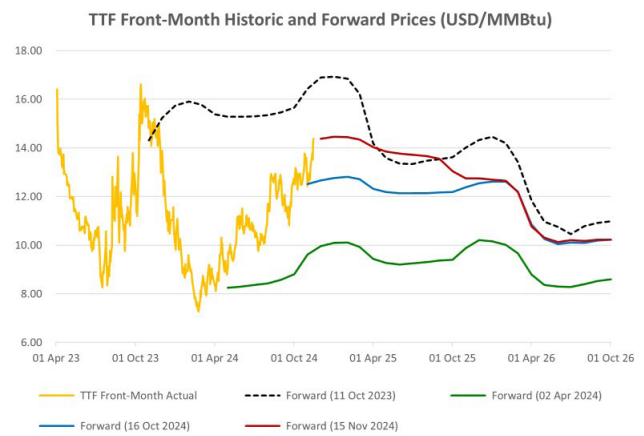
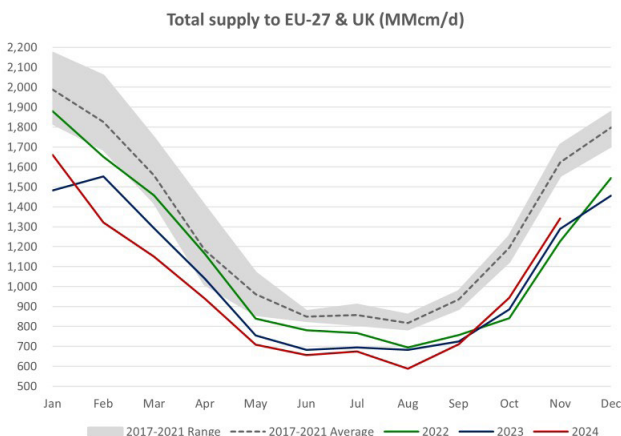
OIES GAS PROGRAMME



### Total European Gas Supply (EU-27 plus UK)

Total supply in November 2024 is average for 1-18 November.

Data sources: ENTSOG Transparency Platform; Eurostat; Gas Infrastructure Europe (AGSI & ALSI); National Gas Transmission (UK); Kpler LNG Platform



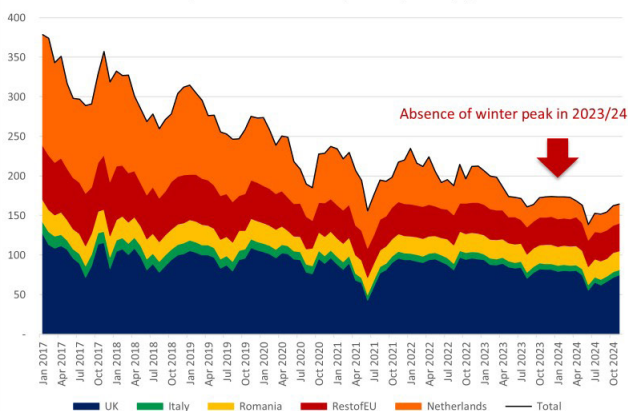
- Total supply: production, pipeline imports, LNG sendout, and net storage withdrawal, minus physical pipeline re-exports to Ukraine and Morocco
- Year-on-year supply increase in October-November 2024 is similar to year-on-year increase in October-November 2023
- Price rally since Feb 2024 driven by tighter global LNG market: limited supply growth and strong demand growth outside Europe
- Summer 2025 forward curve reflects anticipation of continued tight market plus need for substantial European storage replenishment



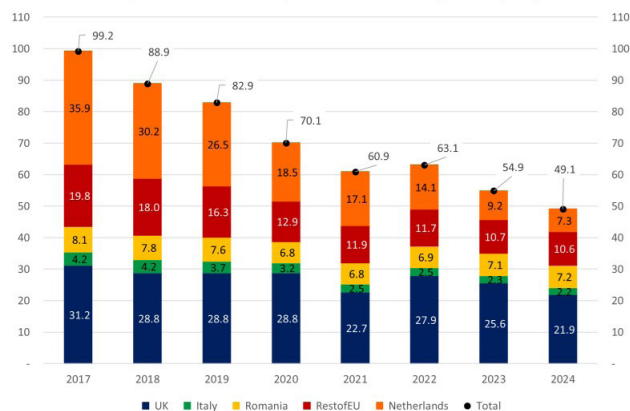
## European Gas Production

Data sources: ENTSOG Transparency Platform; Eurostat; Gas Infrastructure Europe (AGSI & ALSI); National Gas Transmission (UK); Kpler LNG Platform

European Gas Production by Source (mmcm/d)



European Gas Production by Source in Year To Date, Jan-Oct (Bcm)



- European gas production in winter 2023/24 lacked a midwinter peak, and production in Jan-Oct 2024 was -11% year-on-year
- Cessation of Groningen production in Oct 2023 means that decline in European production is slowing but not stopping altogether
- Return of Danish production (suspended at Tyra from September 2019 to March 2024) has added a small amount (5.7 MMcm/d)
- **There is no upside flexibility from production to meet midwinter surge in demand**

EUROPEAN GAS MARKET WINTER OUTLOOK

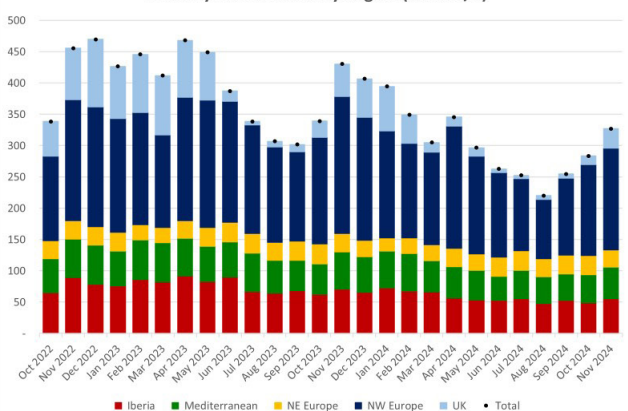
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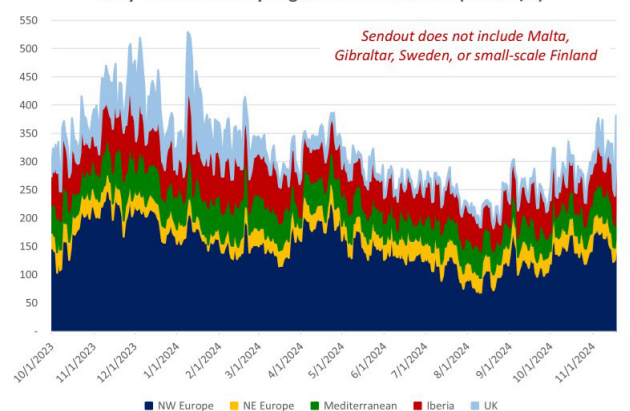
## European LNG Imports and Sendout

Data sources: ENTSOG Transparency Platform; Eurostat; Gas Infrastructure Europe (AGSI & ALSI); National Gas Transmission (UK); Kpler LNG Platform

Monthly LNG Sendout by Region (MMcm/d)



Daily LNG Sendout by Region Since 1 Oct 2023 (MMcm/d)



- LNG sendout provides both seasonal flex (above left) and daily flex (above right) – daily record sendout was 549 MMcm/d (30/11/2022)
- Additional regas capacity at Wilhelmshaven & Stade not expected until at least January, so Alexandroupoli & Mukran expansion are the only recent addition
- Our scenario assumes LNG sendout of 430-450 MMcm/d in Jan-Mar 2025 (similar to Q1 2023) to offset loss of Russian transit via Ukraine. This implies an increase compared to Q1 2024, in a tight global LNG market. In mid-Nov 2024, European delivered LNG prices rose to premium over Asian equivalent

EUROPEAN GAS MARKET WINTER OUTLOOK

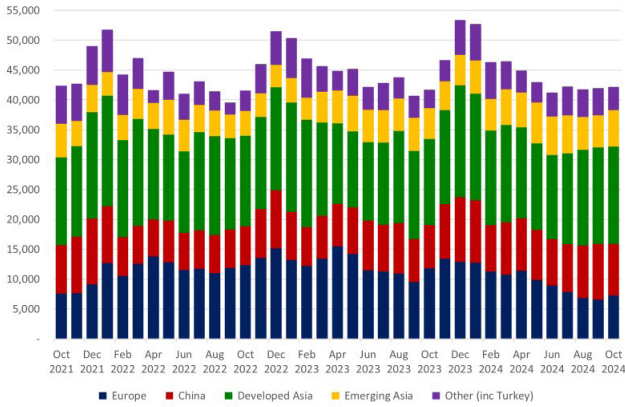
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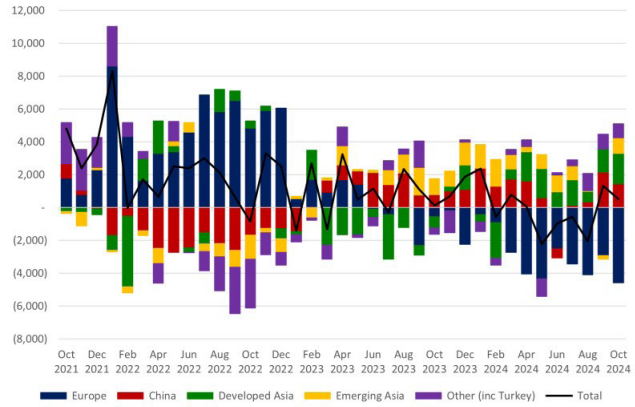
## Global LNG market remains tight

Data source: Kpler LNG Platform  
Imports measured at point of import.

Global LNG Imports (MMcm per Month)



Year-on-Year Change in Global LNG Imports (MMcm)



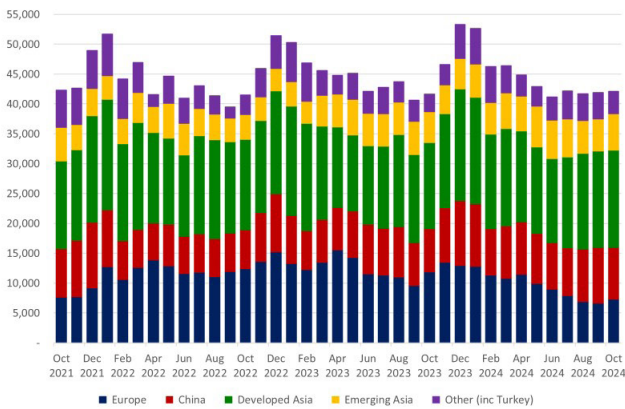
- In 2022, European LNG imports grew at the expense of others, aided by slump in Chinese demand. In Spring 2023, a return of LNG demand growth in China and ‘emerging Asia’ (mostly India & Thailand). ‘Developed Asia’ (JKTS) returned to growth until April 2024. Egypt added demand in summer 2024.
- When combined with faltering global supply, this Asian demand is keeping the market relatively tight and contributed to the price growth seen in both Europe and Asia since late February 2024, despite the year-on-year declines in European LNG imports every month since September 2023



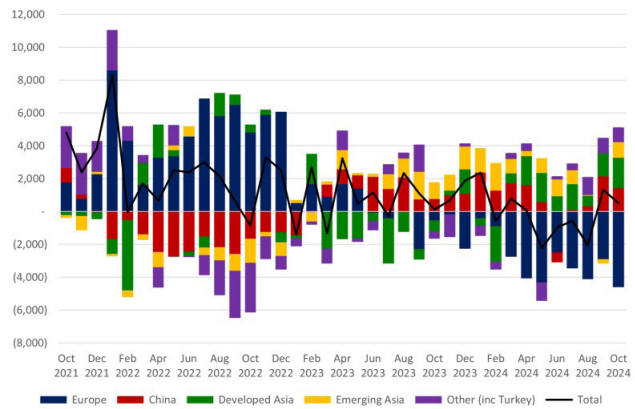
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Year-on-Year Change in Global LNG Imports (MMcm)



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# Al-Attiyah CEO Roundtable

Oils and Refining  
December 2024

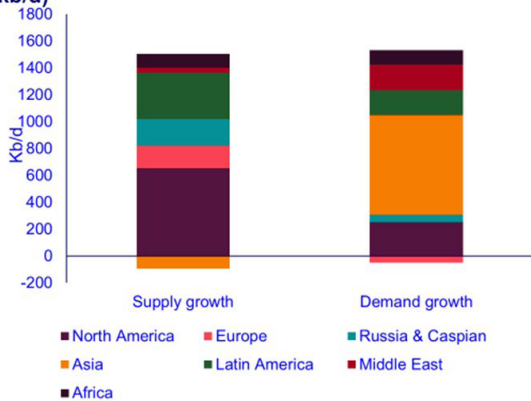
Alan Gelder,  
SVP Refining, Chemicals & Oil Markets



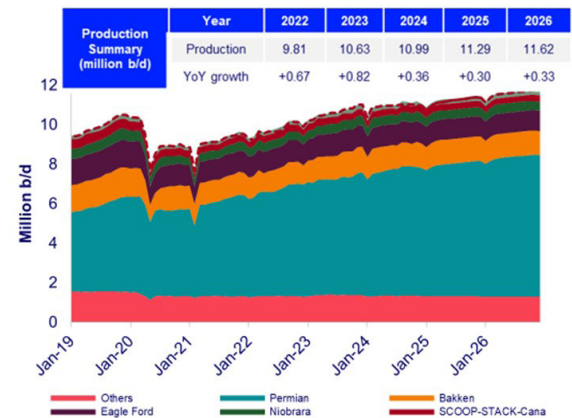
## OPEC's dilemma shows little sign of abating in 2025

In 2025, oil demand growth just outpaces non-OPEC supply growth of which only 300 kb/d is US tight oil

Global 2025 oil demand and non-OPEC supply growth (kb/d)



US Lower 48 oil and condensate production (million b/d)

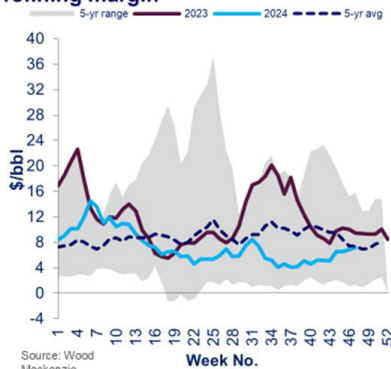


Source: Wood Mackenzie Macro Oils Service

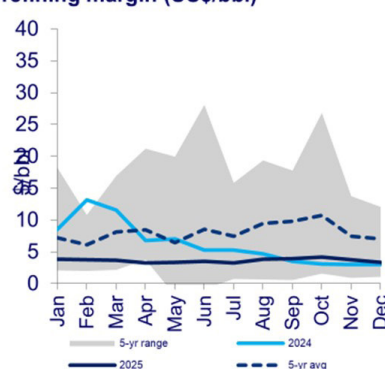


Refining margins are back to historical norms as capacity additions crude runs growth. Less capacity additions scheduled for 2025, but Dangote and others still ramping up. Little change is expected in the Atlantic Basin in 2025.

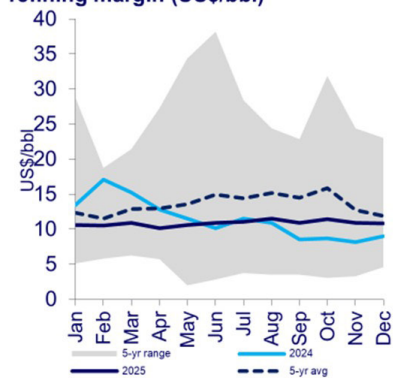
Weekly five-year range global gross refining margin



European Regional Benchmark gross refining margin (US\$/bbl)



USGC Regional Benchmark gross refining margin (US\$/bbl)



Historical European regional reference refinery margin



Source: Wood Mackenzie Product Markets Service Short Term

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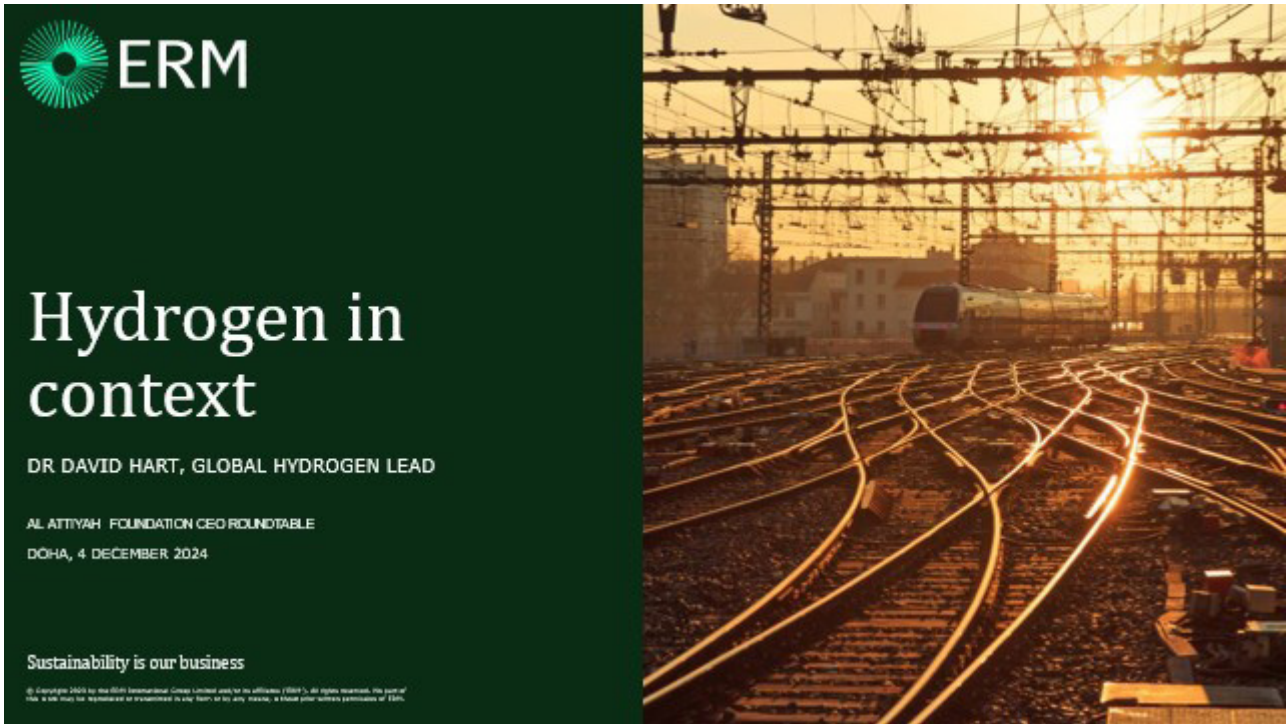
High US import tariffs from growing protectionism present a material downside risk to oil/refining value chains, as oil demand could be over 1 million b/d lower in 2026.

Oil prices could weaken by US\$10 – 15/bbl, with refining margins (ex-US) falling ~US\$2.5/bbl.

- Trump is elected President with full Republican control of Congress (House and Senate) and by Executive Order, Trump immediately imposes a **10% trade tariff on all imports with an additional rate of 60% for Chinese imports**
- In the short-term, Trump's tariffs would **increase the average tariff rate to close to 20%**, from 1.47% in 2022
- China currently accounts for around 18% of imports into the US, and there is **limited scope to avoid tariffs in the short term**, either by pivoting import demand away from China or offsetting imports with domestic production
- These additional tariffs lead to higher import prices which are paid by US consumers and companies. The tariffs could lead to a nine-fold increase in tariff revenue, rising to US\$720 bn in 2025 from an estimated US\$80 bn in 2023. That could **cost each US household an average of US\$4,800 in 2025**
- This would have a **considerable inflationary impact as well as lowering economic growth in the US and globally**
- Global oil demand is nearly 0.5 million b/d lower in 2025, and 1.1 million b/d lower in 2026 because of the import tariffs
- USGC gasoline crack increases by over US\$ 2.5/bbl, but refiners in the rest of the world see margins decrease by an average of US \$2.5/bbl



4



# Hydrogen in context

DR DAVID HART, GLOBAL HYDROGEN LEAD

AL ATTIAH FOUNDATION CEO ROUNDTABLE  
DOHA, 4 DECEMBER 2024

Sustainability is our business

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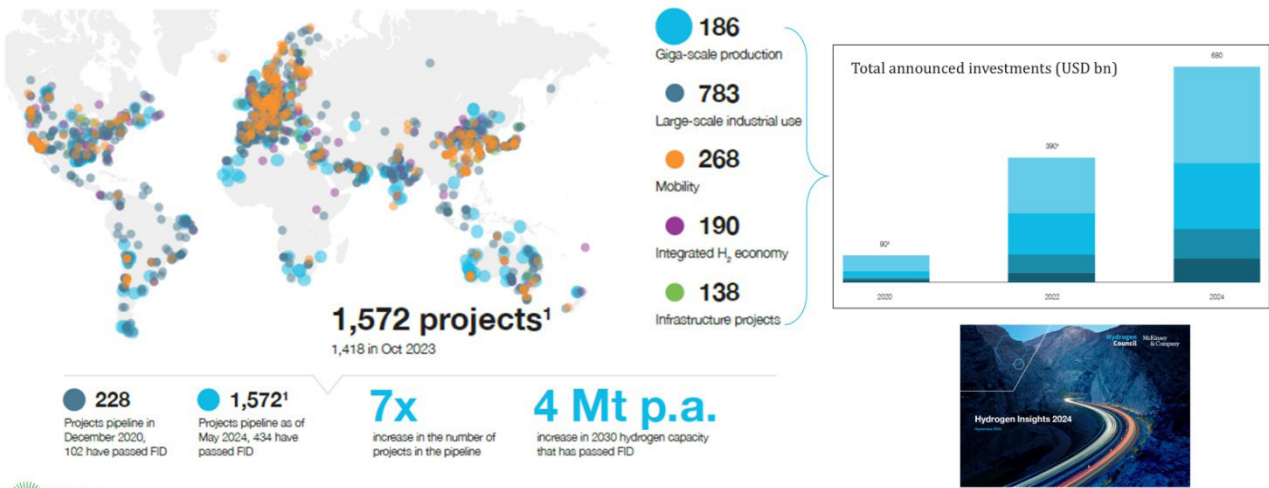
## Hydrogen news encompasses highs and lows

The following table summarizes the news snippets shown in the image:

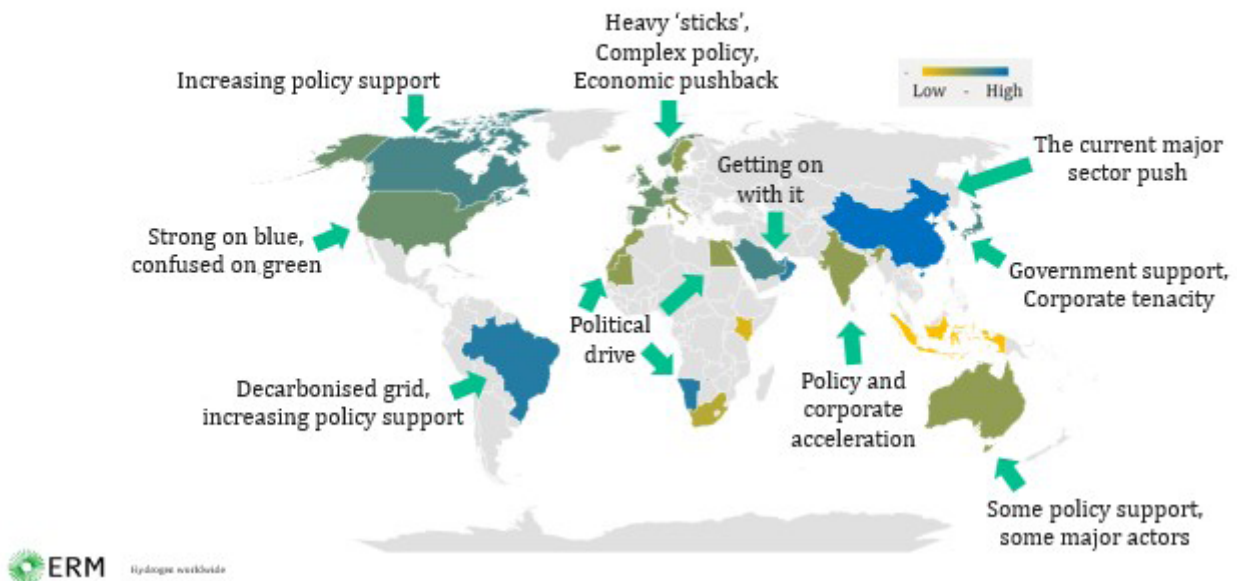
| Date   | News Snippet   | Highlight     |
|--|--|---------------|
| OCT 10, 2024   | UAE, Oman, Morocco to surpass 2030 hydrogen goals: IEA                         | Green outline |
| Vale, GEP eye major green hydrogen plant for low-carbon steel production in Brazil |  | Green outline |
| OCT 10, 2024   | Algerian green hydrogen project to boost European imports via SouthH2 Corridor | Green outline |
| OCT 15, 2024   | LONGi ships 20MW of electrolyzers to Uzbek green ammonia project               | Green outline |
| OCT 10, 2024   | Ground broken on Australian 10MW green hydrogen blending project               | Green outline |
| OCT 09, 2024   | Stadler's leap into the US hydrogen rail market                                | Green outline |
| OCT 15, 2024   | DNV lowers hydrogen demand forecast, citing high costs and policy gaps         | Red outline   |
| OCT 11, 2024   | Ørsted backs out of green hydrogen projects in shift away from e-fuels         | Red outline   |
| OCT 10, 2024   | Uniper and Sasol cancel 200MW hydrogen project amid market hurdles             | Red outline   |
| OCT 09, 2024   | Green Hydrogen Systems undergoes major restructure to cut costs by 50%         | Red outline   |
| OCT 08, 2024   | Denmark-Germany hydrogen pipeline faces three-year delay                       | Red outline   |

## May 2024: the 'industry' is infant, and is growing, but with pains

Global project overview

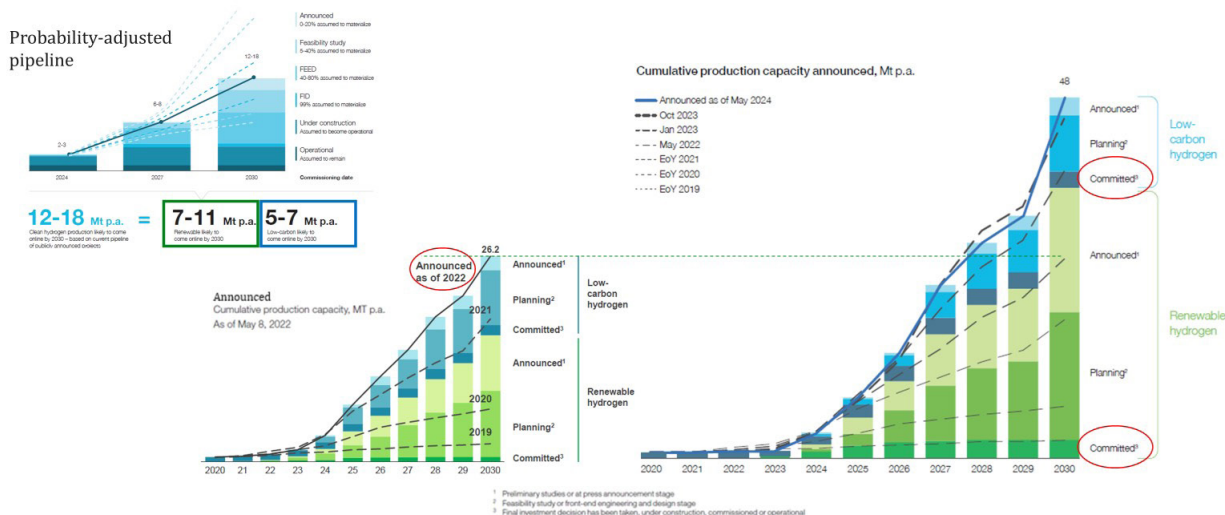


## Enthusiasm – and progress – varies by geography





## Announced production projects continue to grow, likely production also – will green outweigh blue?



## APPENDIX A4 – SLIDE BY MELLISA LEE

Key themes in 2024,

... and in 2025.

### Coal consumption is sticky

Energy security and in particular, affordability, is a priority for developing Asia. Coal use in India, Indonesia and Vietnam continued to rise.

### Can private capital drive change where policy fails?

Government budgets are constrained to offer serious incentives for decarbonisation, but export-oriented consumer goods manufacturers and data centres are driving demand for renewable energy in Asia.

### Global summitry looks broken

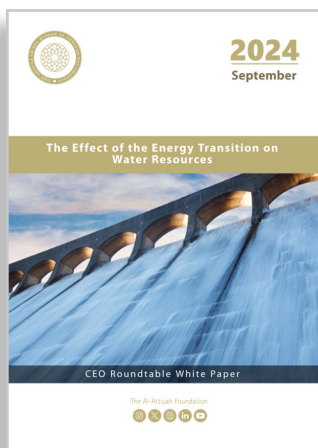
Geopolitical polarisation characterised the COP29 negotiations. Competition and nationalism stand in the way of multilateral solutions. Trade fragmentation is a more likely

### A more polarised world?

While Trump pursues heightened US protectionism, China is promoting greater South-South cooperation. Chinese munificence and an alternative world order are attractive to leaders of Indonesia and



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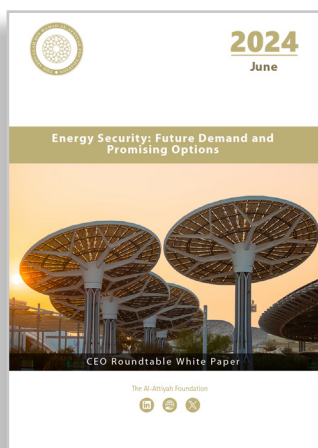
September – 2023

The Effect of the Energy Transition on Water Resources

The third quarterly CEO Roundtable of 2024 commenced with a speech from Vice Chairman of the Board of Trustees of the Al-Attiyah Foundation, His Excellency Ibrahim Ibrahim. During H.E. Ibrahim Ibrahim's address, he extended greetings to members, guests, and speakers gathered in the room and online.



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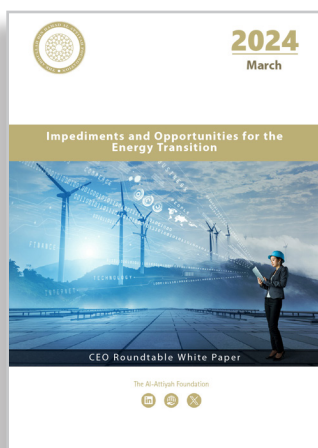
June – 2024

Energy Security: Future Demand and Promising Options

The meeting commenced with a customary welcome from H.E. Abdullah bin Hamad Al- Attiyah, extending greetings to members, guests, and speakers gathered for the second CEO Roundtable of 2024. He noted the relevance of the topic. He said that we hear much about the security of supply of fossil fuels, but equally important to suppliers is the security of demand.



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March – 2024

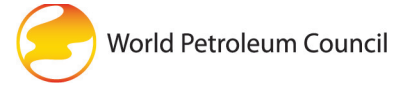
Impediments and Opportunities for the Energy Transition

The meeting commenced with a customary welcome from H.E. Abdullah bin Hamad Al- Attiyah, extending greetings to members, guests, and speakers gathered for the inaugural CEO Roundtable of 2024. He noted the timeliness and relevance of the chosen topic, resonating with all present.





(QR CODE)

Our partners collaborate with the Al-Attiyah Foundation on various projects and research within the themes of energy and sustainable development.





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 [Al-Attiyah Foundation](https://www.youtube.com/channel/UC...)