GECF

MONTHLY GAS MARKET REPORT

March 2024

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About GECF

The Gas Exporting Countries Forum (GECF or Forum) is an intergovernmental organisation gathering the world's leading gas producers and exporters, whose objective is to provide a framework for the exchange of views, experiences, information and data, and cooperation and collaboration amongst its Members in gas-related matters. The GECF comprises 12 Member Countries and 8 Observer Members. The Member Countries of the Forum are Algeria, Bolivia, Egypt, Equatorial Guinea, Iran, Libya, Nigeria, Qatar, Russia, Trinidad and Tobago, United Arab Emirates and Venezuela. Angola, Azerbaijan, Iraq, Malaysia, Mauritania, Mozambique, Peru and Senegal have the status of Observer Members.

The GECF Monthly Gas Market Report (MGMR) is a monthly publication of the GECF focusing on short-term developments in the global gas market related to the global economy, gas consumption, gas production, gas trade (pipeline gas and LNG), gas storage and energy prices.

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Contents

Highlights 1

Feature Article: Nourishing the World: Natural Gas as a Cornerstone of Global Food Security 2

1 Global Perspectives 5

1.1 Global economy 5

1.2 Other Developments 8

2 Gas Consumption 10

2.1 Europe 10
2.1.1 European Union 10
2.1.2 United Kingdom 15

2.2 Asia 16
2.2.1 China 16
2.2.2 India 16
2.2.3 Japan 17
2.2.4 South Korea 17

2.3 North America 18
2.3.1 US 18
2.3.2 Canada 19

2.4 Weather Forecast 19
2.4.1 Temperature Forecast for March to May 2024 19
2.4.2 Precipitation Forecast for March to May 2024 19

3 Gas Production 21

3.1 Global 21

3.2 Europe 22
3.2.1 Norway 23
3.2.2 UK 24
3.2.3 Netherlands 24

3.3 Asia Pacific 25
3.3.1 China 25
3.3.2 India 25
3.3.3 Australia 26

3.4 North America 27
3.4.1. US 27
3.4.2. Canada 29

3.5 Latin America and the Caribbean (LAC) 29
3.5.1 Brazil 29
3.5.2 Argentina 30

3.6 Other Developments 31

4 Gas Trade 32

4.1 Pipeline Natural Gas (PNG) Trade 32
4.1.1 Europe 32
4.1.2 Asia 34
4.1.3 North America 35
4.1.4 Latin America and the Caribbean 35

4.1.5 Other Developments 36

4.2 LNG Trade 37
4.2.1 LNG Imports 37
4.2.2 LNG Exports 40
4.2.3 Global LNG Reloads 42
4.2.4 Arbitrage Opportunity 42
4.2.5 Maintenance Activity at LNG Liquefaction Facilities 43
4.2.6 Other Developments 44
4.2.7 LNG Shipping 45

5 Gas Storage 48

5.1 Europe 48

5.2 Asia 49

5.3 North America 49

6 Gas Balance 50

6.1 EU + UK 50

6.2 OECD 51

6.3 India 51

7 Energy Prices 52

7.1 Gas Prices 52
7.1.1 Gas & LNG Spot Prices 52
7.1.2 Spot and Oil-indexed Long-Term LNG Price Spreads 55
7.1.3 Regional Spot Gas & LNG Price Spreads 55
7.1.4 Gas & LNG Futures Prices 57

7.2 Cross Commodity Prices 58
7.2.1 Oil Prices 58
7.2.2 Coal Prices 58
7.2.3 Carbon Prices 59
7.2.4 Fuel Switching 60

8 Abbreviations 61

9 References 64

List of Figures

Figure 1: Global hunger and undernourishment level 2
Figure 2: Global fertilizer consumption 3
Figure 3: GDP growth 5
Figure 4: Inflation rates 6
Figure 5: Monthly commodity price indices 6
Figure 6: Interest rates in major central banks 7
Figure 7: Exchange rates 7
Figure 8: Gas consumption in the EU 10
Figure 9: Trend in electricity production in the EU in February 2024 (y-o-y change) 10
Figure 10: Gas consumption in Germany 11
Figure 11: Trend in gas consumption in the industrial sector in Germany (y-o-y change) 11
Figure 12: Trend in electricity production in Germany in February 2024 (y-o-y change) 11
Figure 13: German electricity mix in January 2024 11
Figure 14: Gas consumption in Italy 12
Figure 15: Trend in gas consumption in the industrial sector in Italy (y-o-y change) 12
Figure 16: Trend in electricity production in Italy in February 2024 (y-o-y change) 12
Figure 17: Italian electricity mix in February 2024 12
Figure 18: Gas consumption in France 13
Figure 19: Trend in gas consumption in the industrial sector in France (y-o-y change) 13
Figure 20: Trend in electricity production in France in February 2024 (y-o-y change) 13
Figure 21: French nuclear capacity availability 13
Figure 22: Gas consumption in Spain 14
Figure 23: Trend in gas consumption in the industrial sector in Spain (y-o-y change) 14
Figure 24: Trend in electricity production in Spain in February 2024 (y-o-y change) 14
Figure 25: Spanish electricity mix in February 2024 14
Figure 26: Gas consumption in the UK 15
Figure 27: Trend in gas consumption in the industrial sector in the UK (y-o-y change) 15
Figure 28: Trend in electricity production in UK in February 2024 (y-o-y change) 15
Figure 29: UK electricity mix in February 2024 15
Figure 30: Gas consumption in China 16
Figure 31: Trend in electricity production in China in in December 2023 (y-o-y change) 16
Figure 32: Gas consumption in India 17
Figure 33: India's gas consumption by sector in Jan 17
Figure 34: Gas consumption in Japan 17
Figure 35: Nuclear availability in Japan 17
Figure 36: Gas consumption in South Korea 18
Figure 37: HDD in South Korea (y-o-y change) 18
Figure 38: Gas consumption in the US 18
Figure 39: Electricity production in the US in February 2024 (y-o-y change) 18
Figure 40: Gas consumption in Canada 19
Figure 41: HDD in Canada (y-o-y change) 19
Figure 42: Temperature forecast March to May 2024 20
Figure 43: Precipitation forecast March to May 2024 20
Figure 44: Trend in monthly global gas rig count 21
Figure 45: Monthly gas and liquid discovered volumes 22
Figure 46: Discovered volumes in January 2024 by region 22
Figure 47: Europe's monthly gas production 23
Figure 48: Trend in gas production in Norway 23
Figure 49: Trend in gas production in the UK 24
Figure 50: Trend in gas production in the Netherlands 24
Figure 51: Trend in gas production in China 25
Figure 52: Trend in CBM production in China 25
Figure 53: Trend in gas production in India 26
Figure 54: Distribution of gas production in India 26
Figure 55: Trend in gas production in Australia 26
Figure 56: Trend in CBM production in Australia 27
Figure 57: Trend in shale gas production in the US shale oil/gas producing regions 27
Figure 58: US shale region oil and gas rig count 28
Figure 59: Drilled but uncompleted well (DUCs) counts in the US 28
Figure 60: New-well gas production per rig 29
Figure 61: Trend in gas production in Canada 29
Figure 62: Trend in gas production in Brazil 30
Figure 63: Distribution of gross gas production in Brazil 30
Figure 64: Trend in gas production in Argentina 31
Figure 65: Trend in shale gas production in Argentina 31
Figure 66: Monthly PNG imports to the EU 32
Figure 67: Year-to-date EU PNG imports by supplier 32
Figure 68: Monthly EU PNG imports by supplier 32
Figure 69: Y-o-Y PNG supply changes in the EU 32

Figure 70: EU PNG imports by supply route, ... 33
Figure 71: PNG imports to the EU by supply route (2M 2024 v 2M 2023) 33
Figure 72: Monthly PNG imports in China 34
Figure 73: Year-to-date PNG imports in China 34
Figure 74: Monthly PNG imports in Singapore 34
Figure 75: Monthly PNG imports in Thailand 34
Figure 76: Historical net PNG trade in the USA 35
Figure 77: Monthly US PNG trade 35
Figure 78: Monthly PNG exports from Bolivia 35
Figure 79: Trend in global monthly LNG imports 37
Figure 80: Trend in regional LNG imports 37
Figure 81: Trend in Europe's monthly LNG imports 38
Figure 82: Top LNG importers in Europe 38
Figure 83: Trend in Asia's monthly LNG imports 38
Figure 84: Top LNG importers in Asia Pacific 38
Figure 85: Trend in LAC's monthly LNG imports 39
Figure 86: Top LNG importers in LAC 39
Figure 87: Trend in MENA's monthly LNG imports 39
Figure 88: Top LNG importers in MENA 39
Figure 89: Trend in global monthly LNG exports 40
Figure 90: Top 10 LNG exporters in Feb 2024 40
Figure 91: Trend in GECF monthly LNG exports 41
Figure 92: GECF's LNG exports by country 41
Figure 93: Trend in non-GECF monthly LNG exports 41
Figure 94: Non-GECF's LNG exports by country 41
Figure 95: Trend in global monthly LNG reloads 42
Figure 96: Global LNG reloads by country 42
Figure 97: Price spreads & shipping costs between Asia & Europe spot LNG markets 43
Figure 98: Maintenance activity at LNG liquefaction facilities during January (2023 and 2024) 43
Figure 99: Number of LNG export cargoes 45
Figure 100: Number of LNG cargoes by exporting country 45
Figure 101: Changes in LNG cargo exports 45
Figure 102: Average LNG spot charter rate 46
Figure 103: Average price of shipping fuels 46
Figure 104: LNG spot shipping costs for steam turbine carriers 47
Figure 105: Underground gas storage in the EU 48
Figure 106: Weekly rate of EU UGS level changes 48
Figure 107: UGS in EU countries as of Feb 29, 2024 49
Figure 108: Total LNG storage in the EU 49
Figure 109: LNG in storage in Japan and South Korea 49
Figure 110: Underground gas storage in the US 49
Figure 111: Weekly rate of UGS changes in the US 49
Figure 112: EU + UK monthly gas balance 50
Figure 113: Daily gas & LNG spot prices 52
Figure 114: Daily variation of spot prices 52
Figure 115: Monthly European spot gas prices 53
Figure 116: Monthly Asian spot LNG prices 53
Figure 117: Monthly North American gas spot prices 54
Figure 118: Monthly South American LNG spot prices 54
Figure 119: Asia: Spot and oil-indexed price spread 55
Figure 120: Europe: Spot and oil-indexed price spread 55
Figure 121: NEA-TTF price spread 56
Figure 122: NBP-TTF price spread 56
Figure 123: NWE LNG-TTF price spread 56
Figure 124: NWE LNG – SA LNG price spread 56
Figure 125: NEA-HH price spread 56
Figure 126: TTF-HH price spread 56
Figure 127: Gas & LNG futures prices 57
Figure 128: Variation in gas & LNG futures prices 57
Figure 129: Monthly crude oil prices 58
Figure 130: Monthly coal parity prices 59
Figure 131: EU carbon prices 59
Figure 132: Daily TTF vs coal-to-gas switching prices 60

List of Tables

Table 1: New LNG sale agreements signed in February 2024 44
Table 2: Shipping costs for LNG spot cargoes from selected regions ($/MMBtu) – February 2024 46
Table 3: EU + UK gas supply/demand balance for January 2024 (bcm) 50
Table 4: OECD's gas supply/demand balance for November 2023 (bcm) 51
Table 5: India's gas supply/demand balance for January 2024 (bcm) 51

Highlights

Global economy: Oxford Economics is projecting global GDP growth for 2024 to be 2.9%, based on purchasing power parity. In the US, GDP growth is projected at 2.4%, while in the Euro area, it is projected at 0.5%. Looking forward to 2025, the global economy is expected to experience a modest rebound, with global GDP growth projected at 2.8%. Global inflation is expected to continue its downward trend in 2024, reaching an annual average of 4.4%, from 6.1% in 2023.

Gas consumption: In February 2024, following a double-digit y-o-y growth in January, EU gas demand saw a significant decline of 8%, primarily driven by a reduced gas demand for heating in the residential sector due to warmer-than-usual winter. Moreover, high wind and hydroelectric power output affected gas consumption in the power generation sector. The US experienced a 3.4% y-o-y decline in gas consumption, reaching 80 bcm. The mild weather significantly reduced gas consumption in the residential, commercial and power generation sectors. In January 2024, China's apparent gas demand rose by 8.7% y-o-y, driven by cold weather, the revival of economic activities, and lower gas prices.

Gas production: In January 2024, Europe witnessed a 1.2% y-o-y decline in gas production, reaching 17.4 bcm. This decline was largely due to reduced output in the Netherlands and the UK, although the decline was slightly compensated by Norwegian production rise. In the US, the major shale gas-producing regions recorded a 5% y-o-y increase in production in February 2024 to reach 82.5 bcm. Additionally, February 2024 witnessed a m-o-m rise of 5 units in the global number of gas drilling rigs, reaching 392 rigs.

Gas trade: In February 2024, EU countries imported 12.4 bcm of PNG, which corresponds to a 7% decrease m-o-m. Meanwhile, global LNG imports experienced little change from the previous year, totalling 33.7 Mt. Nevertheless, the Asia Pacific, LAC and MENA regions witnessed upticks in LNG imports, counterbalancing the dip in imports observed in Europe and North America. Increased gas consumption in specific countries and declining spot LNG prices, which spurred demand in price-sensitive markets, were key factors behind the rise in LNG imports in the Asia Pacific region. Conversely, reduced gas consumption and a notable price differential of spot LNG between Asia Pacific and Europe were the main drivers behind the decrease in LNG imports in Europe.

Gas storage: Regions in the northern hemisphere continued to record net gas withdrawals in response to the heating demand of the winter season. In February 2024, the average volume of gas in storage in the EU decreased to 68.6 bcm, representing 66% of the storage capacity of the region. In the US, the average gas storage level also declined, reaching 70.5 bcm, or 53% of the country's capacity. In Asia, the estimated combined volume of LNG in storage in Japan and South Korea fell to 10.3 bcm. However, these figures are higher than the five-year average.

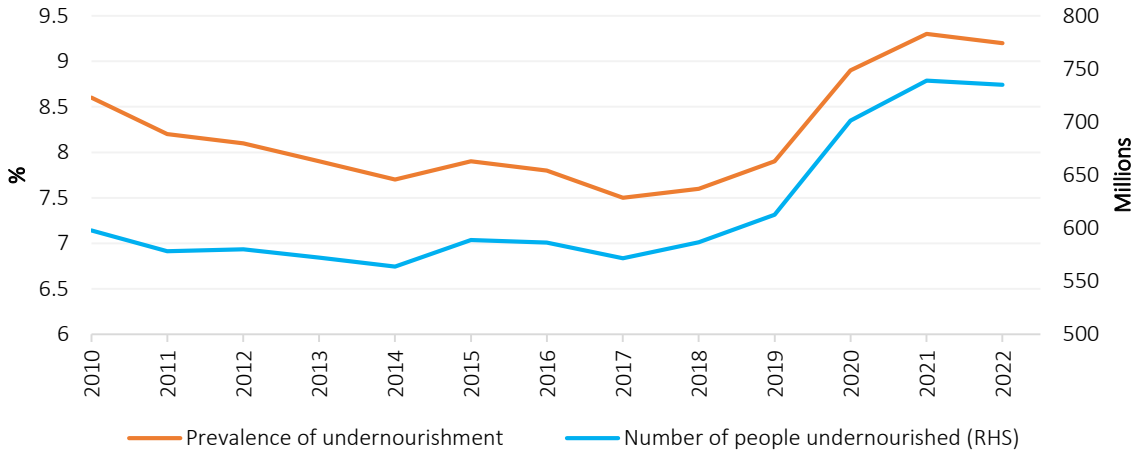
Energy prices: Gas and LNG spot prices in Europe and Asia declined for the third consecutive month influenced by sustained bearish market fundamentals. On the demand side, spot prices were pressured by above-normal temperatures in Europe and Asia. Concurrently, robust LNG supply and elevated storage levels ensured ample supply in both regions. The average TTF spot price stood at $8.1/MMBtu, reflecting a decline of 15% m-o-m. In addition, the average NEA spot LNG price experienced a 12% m-o-m decrease, reaching $8.8/MMBtu. Additionally, in the US, Henry Hub prices experienced a significant decline, reaching daily lows of $1.5/MMBtu during the month. In the upcoming months, increased demand from price-sensitive countries in South and Southeast Asia could potentially bolster spot prices.

Feature Article: Nourishing the World: Natural Gas as a Cornerstone of Global Food Security

As the world confronts the challenge of feeding a burgeoning global population, the role of natural gas in enhancing food security becomes increasingly crucial. The situation is projected to become more acute as the global population is expected to reach around 9.7 billion by 2050 and living standards to improve, significantly increasing the demand for food. In this context, natural gas, given its role in the production of fertilizers, plays a pivotal role in addressing the challenge of global hunger.

The UN Sustainable Development Goal #2 aims to create a world free of hunger by 2030. However, current estimations of undernourishment suggest that the world is significantly off track in achieving this goal of zero hunger. The 2023 edition of the *State of Food Security and Nutrition in the World* report by the Food and Agriculture Organization of the United Nations underlines a consistent rise in the number of people suffering from undernourishment. On the global level, hunger levels have soared particularly within the recent half-decade. By 2022, there are an estimated 735 million persons worldwide afflicted by hunger, or 9.2% of the global population (Figure 1). The hunger crisis is most severe in sub-Saharan Africa, where 22.5% of the population is undernourished, but challenges also abound in parts of western Asia and in the Caribbean.

Figure 1: Global hunger and undernourishment level



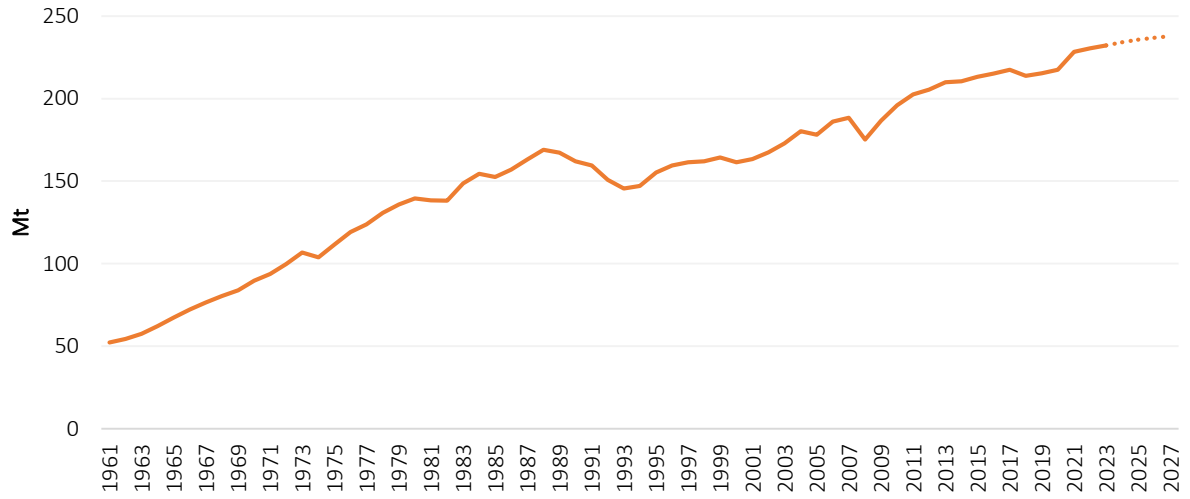
Source: GECF Secretariat based on data from the Food and Agriculture Organization of the United Nations

Fertilizers play a central role in modern agriculture, contributing significantly to increased crop yields and overall food production. Based on various estimates, fertilizers contribute to 50% of global food production. The absence of fertilizers would likely lead to a drastic reduction in food availability, thereby intensifying the existing hunger crisis.

The production of fertilizers heavily depends on natural gas. It is the primary feedstock for the synthesis of ammonia, which is a key component of nitrogen-based fertilizers. The Haber-Bosch process, which combines nitrogen from the air with hydrogen derived from natural gas, is responsible for producing over 70% of the world's ammonia production, the rest being through coal-gasification.

The impact of natural gas-driven fertilizers on food security is substantial. Crop yields, particularly for staples like wheat and rice, have increased significantly in recent decades due to the application of nitrogen fertilizers. This increase is critical, especially in countries with rapidly growing populations and limited arable land. Enhanced crop yields directly contribute to improved food availability and accessibility, playing a crucial role in mitigating global hunger. According to the World Bank, global fertilizer nutrient consumption has been multiplied by a factor of four since 1960 and will keep its uptrend in upcoming years (Figure 2). Moreover, the International Fertiliser Association (IFA) predicts an increase in global fertiliser consumption in the short to medium term, by 2% y-o-y in 2024, and averaging around 1.6% y-o-y in the subsequent three years[1].

Figure 2: Global fertilizer consumption



Source: GECF Secretariat based on data from the World Bank DataBank[2]

Conversely, global fertiliser production continues to be hampered by a myriad of risks, including worldwide climate, the global economic situation, geopolitical events, and logistical constraints. Nevertheless, the IFA remains optimistic on the supply of fertilisers in the short term, driven by investment in fertiliser capacity in regions, which have access to low-cost natural gas.

The role of natural gas in global food security extends beyond fertilizer production. It is also used in various aspects of the agricultural and food processing sectors. For example, natural gas is employed for heating, essential for growing crops in controlled environments. Additionally, natural gas is utilized in food processing industries for cooking and heating, where consistent and controlled thermal energy is required.

The refrigeration and cold storage of food products also rely on energy, where natural gas plays a key role. The use of natural gas-sourced energy in refrigeration systems ensures that perishable products are stored and transported at safe temperatures, thus reducing food spoilage and waste. This is particularly important in managing the global food supply chain, ensuring that food produced in one part of the world can be safely and efficiently transported to another where it is needed.

[1] Medium-Term Fertilizer Outlook 2023 - 2027, IFA Market Intelligence Service
[2] https://databank.worldbank.org/source/world-development-indicators/Series/AG.CON.FERT.ZS

The use of natural gas in agriculture also has broader economic implications. By enhancing agricultural productivity, natural gas contributes to the economic well-being of farmers and rural communities. This, in turn, has a positive impact on local and national economies, driving economic growth and development.

Furthermore, the availability of natural gas-driven fertilizers has implications for international trade in agricultural products. Countries that have access to natural gas resources have a competitive advantage in agricultural production. This can lead to increased exports of agricultural products, contributing to global food availability and trade.

Looking ahead, the role of natural gas in agriculture and food security is likely to evolve with technological advancements and changing market dynamics. Innovations in fertilizer production, more efficient use of natural gas, and the development of new agricultural technologies are expected to further enhance the role of natural gas in supporting global food security.

In conclusion, natural gas is a cornerstone of global food security, playing a critical role in the production of fertilizers and supporting various aspects of the agricultural and food processing sectors. Its contribution to enhancing crop yields, improving food availability, and supporting economic development is significant. In this context, the stability of natural gas markets is also interlinked with global food security. It is imperative that there continues to be investment in natural gas production, downstream industries such as fertilisers, and in strengthening logistical value chains, to ensure that these important commodities are available, accessible, and affordable. As the world faces the challenge of feeding a growing population, the sustainable and efficient use of natural gas will remain a key factor in ensuring global food security.

1 Global Perspectives

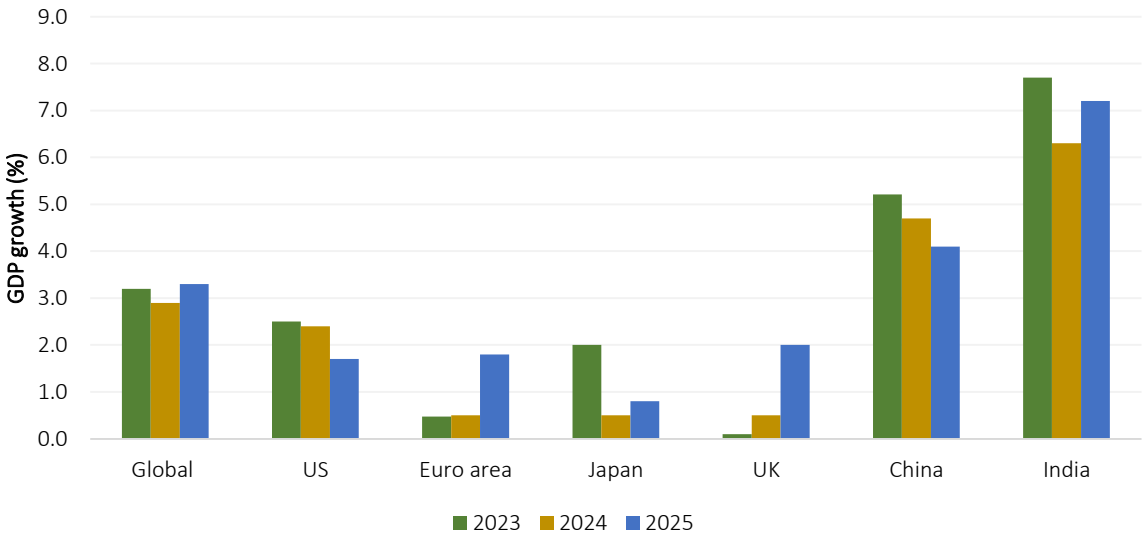
1.1 Global economy

As of March 2024, Oxford Economics revised its forecast for global GDP growth for 2024, based on the purchasing power parity method, upward by 0.1 percentage points to 2.9%. In the US, GDP growth forecast has been revised upward by 0.1 percentage points to 2.4%. This adjustment reflects the strength of the labour market, easing financial conditions and robust consumer spending. In China, the GDP growth forecast was adjusted upward by 0.3 percentage points to 4.7%, in response to new policy stimuli, including tax relief measures and industry support. Conversely, in the Euro area, the GDP growth forecast has been marginally revised downward by 0.1 percentage points to 0.5%. Economic activity in the Euro area continues to be relatively weak, however, there is potential for slight improvement in the second half of the year as inflation pressures subside.

Furthermore, the Organization of Petroleum Exporting Countries (OPEC) revised its forecast for global GDP growth in 2024 upwards by 0.1 percentage points compared to the previous month, to 2.8%. This upward revision was primarily attributed to expectations of continued steady growth in 2024, which will be supported by easing inflation in major economies and a shift towards more accommodative monetary policies. Moreover, prospects for stronger-than-expected growth in China and India may also boost global economic activity this year.

Looking ahead to 2025, the global economy is expected to experience a modest rebound. Oxford Economics has revised its forecast for global GDP growth upward by 0.2 percentage points to 3.3%. In the US, economic growth in 2025 is expected to slow down; however, the GDP growth forecast has been revised upward by 0.3 percentage points to 1.7%. In the Euro area, economic growth is expected to accelerate with the GDP growth forecast being maintained at 1.8%. Additionally, China's economic growth is projected to decelerate in 2025, as indicated by a GDP growth forecast of 4.1% (Figure 3).

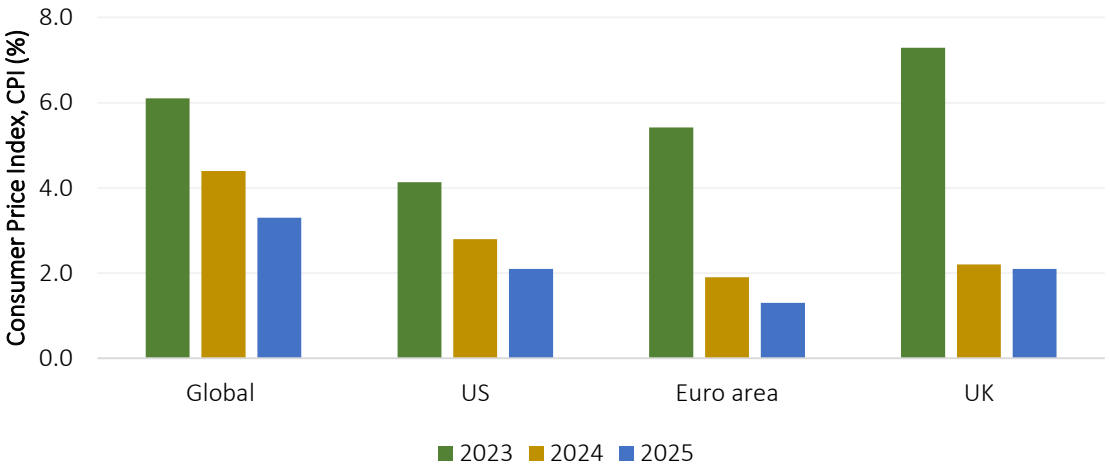
Figure 3: GDP growth



Source: GECF Secretariat based on data from Oxford Economics
Note: Global GDP growth calculated based on purchasing power parity.

Global inflation is expected to average 4.4% in 2024, declining from 6.1% in 2023. Furthermore, in 2025, global inflation is projected to fall to 3.3%. In the Euro area, inflation is projected to fall to 1.9% in 2024 and 1.3% in 2025. In the UK, inflation is expected to be 2.2% in 2024 and 2.1% in 2025. In the US, inflation is expected to decline to 2.8% in 2024 and 2.1% in 2025 (Figure 4).

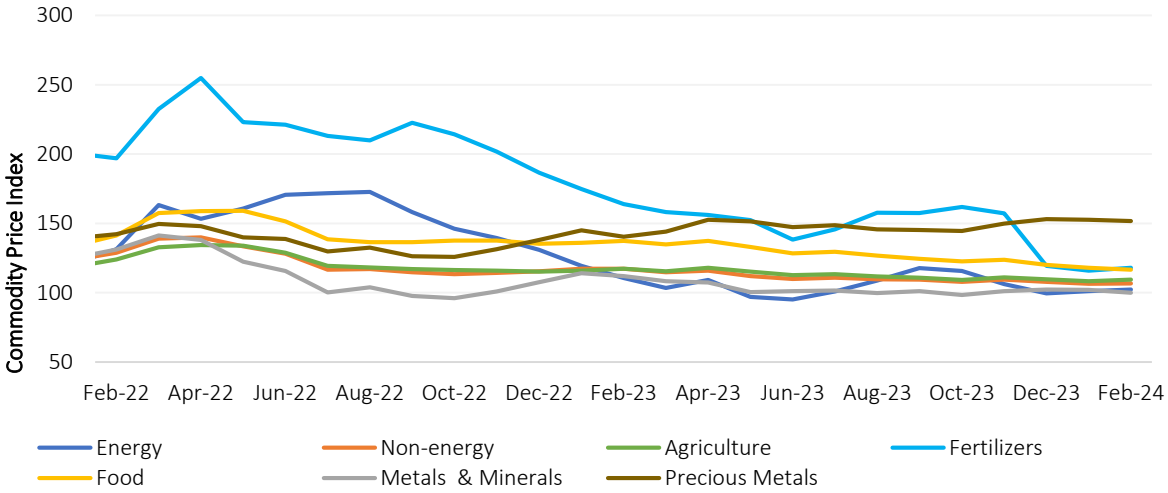
Figure 4: Inflation rates



Source: GECF Secretariat based on data from Oxford Economics

In February 2024, commodity prices in the energy sector increased for the second consecutive month. The energy price index experienced a 1% increase m-o-m, but was 7% lower y-o-y. This increase was primarily due to the uptick in oil prices during the month. Meanwhile, the non-energy price index remained relatively stable m-o-m but reflected a 9% decrease y-o-y. Marginal increases in the agriculture and fertilizer price indices were balanced by declines in metals and minerals price indices. Moreover, the fertilizer price index reflected a 2% increase m-o-m and 28% decrease y-o-y (Figure 5).

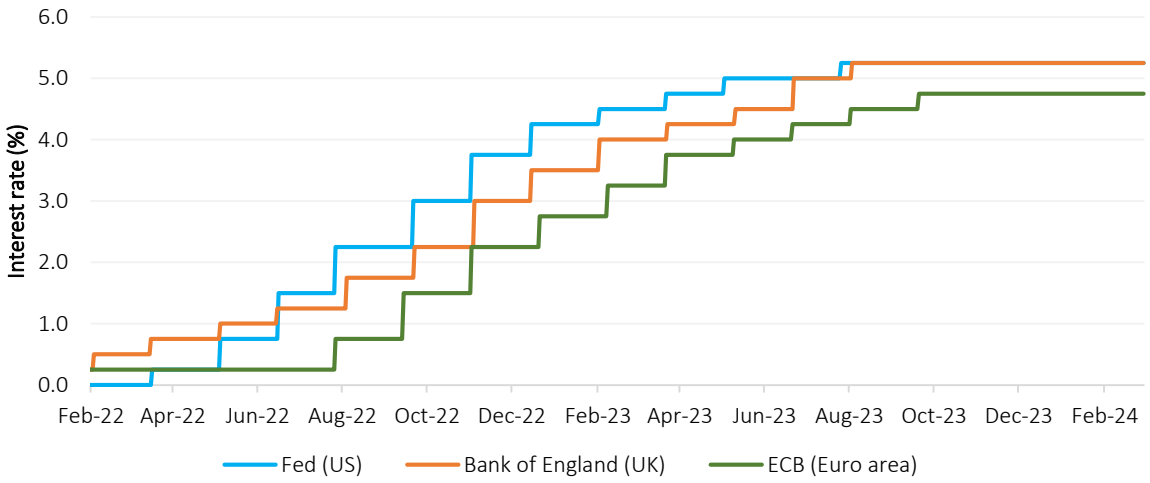
Figure 5: Monthly commodity price indices



Source: GECF Secretariat based on data from World Bank Commodity Price Data
Note: Monthly price indices based on nominal US dollars, 2010=100. The energy price index is calculated using a weighted average of global crude oil (84.6%), gas (10.8%) and coal (4.7%) prices. The non-energy price index is calculated using a weighted average of agriculture (64.9%), metals & minerals (31.6%) and fertilizers (3.6%).

In February 2024, the US Federal Reserve (Fed) maintained its benchmark interest rate within the range of 5.25% to 5.50%. The Fed's last rate hike occurred in July 2023 (Figure 6). Similarly, the Bank of England (BOE) kept its key interest rate at 5.25%, following its most recent increase in August 2023. The European Central Bank (ECB) also held its key interest rates, with the main refinancing operations, marginal lending facility and deposit facility rates at 4.5%, 4.75% and 4.0%, respectively, since their last hike in September 2023. Central banks are expected to approach a potential reduction in interest rates with considerable caution.

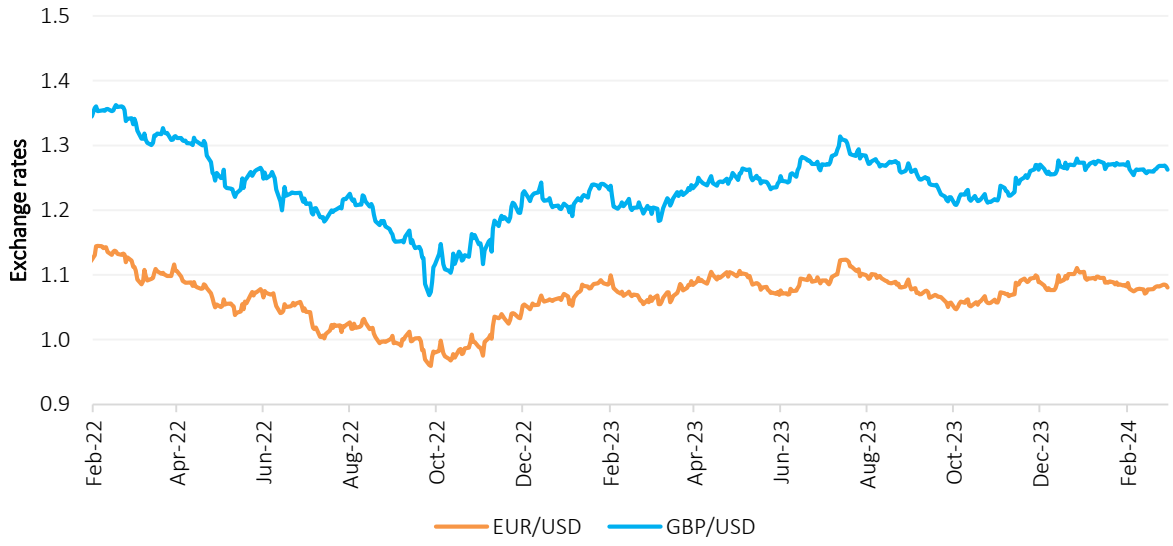
Figure 6: Interest rates in major central banks



Source: GECF Secretariat based on data from US Federal Reserve, European Central Bank and Bank of England

In February 2024, the euro depreciated slightly against the US dollar, resulting in an average exchange rate of $1.0794. This represented a 1% m-o-m decrease and 1% y-o-y increase. Similarly, the British pound also depreciated against the US dollar, as the average exchange rate reached $1.2632 reflecting a 1% m-o-m decrease but was 5% higher compared to the previous year (Figure 7).

Figure 7: Exchange rates



Source: GECF Secretariat based on data from Refinitiv Eikon

1.2 Other Developments

7th GECF Summit: The 7th Summit of Heads of State and Government of the Member Countries of the Gas Exporting Countries Forum (GECF) convened in Algiers, the People's Democratic Republic of Algeria, on March 2, 2024. The Summit brought together Heads of State and Government from GECF Member Countries, including Algeria, Bolivia, Egypt, Equatorial Guinea, Iran, Libya, Nigeria, Qatar, Russia, Trinidad and Tobago, the United Arab Emirates and Venezuela, and from Observer Members, namely Angola, Azerbaijan, Iraq, Malaysia, Mauritania, Mozambique, and Peru, and from Guest Countries, including Italy, Oman, Senegal, and Tunisia. The Summit was also attended by representatives from international organizations, namely the African Energy Commission (AEC), the African Petroleum Producers' Organization (APPO), the Economic Research Institute for ASEAN and East Asia (ERIA), the Organization of Arab Petroleum Exporting Countries (OAPEC), and the Organization of the Petroleum Exporting Countries (OPEC).

The Summit focused on the theme "Natural Gas for a Secure and Sustainable Future," underscoring the increasing relevance of natural gas as an economical, dependable, and sustainable energy source. This is crucial for fostering socio-economic growth and addressing the energy trilemma: security, affordability, and sustainability. Moreover, natural gas is essential for food security. In this context, the leaders engaged in comprehensive discussions, tackling geopolitical, economic, and present natural gas market conditions, alongside exploring future opportunities for the industry. The leaders engaged in-depth discussions, addressing geopolitical, economic, and current natural gas markets conditions, as well as future prospects for the industry.

During the Summit, the leaders approved the Algiers Declaration, which expressed the leaders' resolve to *"promote natural gas as an abundant, affordable, flexible and reliable energy source, and harness and develop more environmentally-friendly, efficient and sustainable natural gas technologies."* Moreover, there was a strong commitment to *"advocate for the wider utilisation of natural gas in domestic and international markets, especially as a strategic measure to tackle energy poverty and pursue United Nations Sustainable Development Goals. This includes championing natural gas as a pivotal source of energy for a just, inclusive and prosperous future, ensuring that no one is left behind."* Additionally, the leaders also resolved their common determination to *"contribute to the inclusion of natural gas as an environmentally sustainable natural resource in climate, investment and fiscal regulations, international banking and global trade".*

Moreover, the 7th GECF Summit welcomed the accession of the Republic of Mozambique, the Islamic Republic of Mauritania, and the Republic of Senegal to the Forum, reaffirming the GECF's collective pursuit of fostering energy cooperation and dialogue.

GECF Global Gas Outlook 2050: The GECF officially launched the 8th edition of its annual flagship publication, the Global Gas Outlook (GGO), on March 12, 2024 via video conference. This publication addresses the intricate challenges of the energy trilemma, exploring economic growth, energy demand, supply complexities, and the evolving landscape of natural gas. Additionally, it presents long-term projections and in-depth analyses of the global energy system, with a special focus on natural gas. The launch was attended by His Excellency Sheikh Mishal bin Jabor Al-Thani, GECF Executive Board Chairman, and distinguished representatives from the GECF member and observer countries.

G20 Ministers' Meetings 2024: The G20 Foreign Ministers' Meeting took place on February 21-22, 2024, in Rio de Janeiro, Brazil. The current geopolitical tensions and the reform of global governance stood out as key discussion points. The ministers concurred that multilateral institutions, including the United Nations (UN), World Trade Organization (WTO), World Bank (WB) and International Monetary Fund (IMF), needed reforms to better address current global challenges. Following this, the G20 Finance Ministers' Meeting was held on February 28-29, 2024, in Sao Paulo, Brazil. The ministers shared insights on global economic developments, acknowledging that the economic recovery has been more robust than anticipated. However, the medium-term growth outlook remains subdued. The ministers noted that current challenges exacerbate longstanding socio-economic and environmental issues worldwide, disproportionately affecting the most impoverished and vulnerable groups, primarily in developing countries. The ministers highlighted the paramount importance of enhanced international economic cooperation to address global challenges effectively.

China's Two Sessions 2024: China commenced its annual plenary sessions of the National People's Congress (NPC) and the Chinese People's Political Consultative Conference (CPPCC), collectively referred to as the 'Two Sessions', on March 4, 2024, at the Great Hall of the People, Beijing. For 2024, China has set its economic growth target at 5%, and aims to cut its energy intensity by 2.5%.

2 Gas Consumption

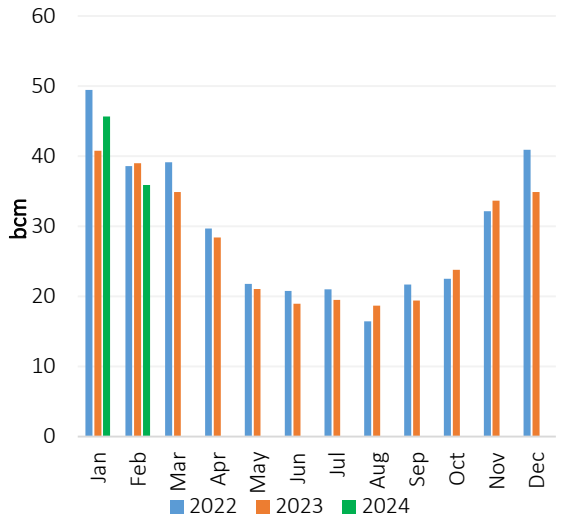
2.1 Europe

2.1.1 European Union

In February 2024, following a double-digit growth in January, EU gas demand experienced a significant decline of 8%, primarily driven by warmer-than-usual winter, which reduced heating requirements in the residential sector. Additionally, there was a noticeable stagnation in gas consumption within the industrial sector, which occurred despite a downward trend in gas prices (Figure 8). Moreover, high wind and hydroelectric power output significantly influenced the reduction in gas consumption within the power generation sector.

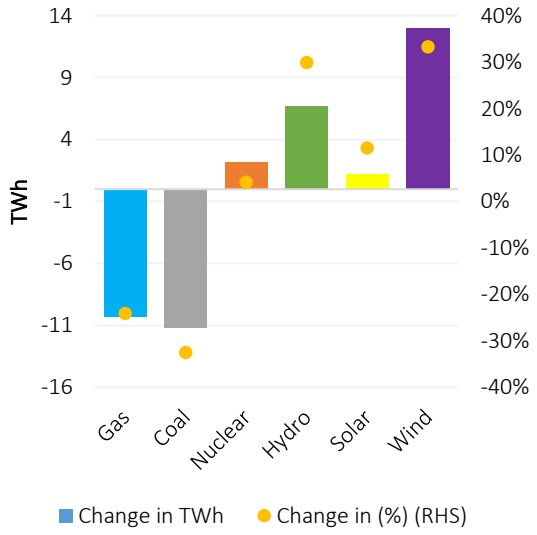
Regarding electricity production, gas-based generation in the EU experienced a 24% y-o-y decline, while total electricity production modestly increased by 0.4%, reaching 212 TWh. This significant decrease in gas consumption within the power sector can be attributed to increased outputs from nuclear, hydro, solar and wind (4%, 30%, 12% and 33% y-o-y growth, respectively). Conversely, electricity generated from coal witnessed a substantial decline of 33% y-o-y (Figure 9). Within the power mix, renewables held the largest share at 34%, followed by nuclear at 25%, gas at 15%, hydro at 14% and coal at 12%.

Figure 8: Gas consumption in the EU



Source: GECF Secretariat based on data from Entsog and Refinitiv

Figure 9: Trend in electricity production in the EU in February 2024 (y-o-y change)

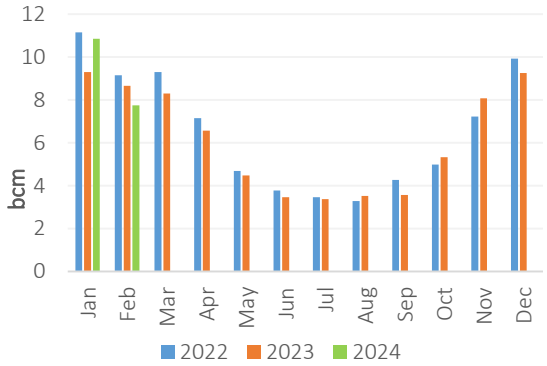


Source: GECF Secretariat based on data from Ember

2.1.1.1 Germany

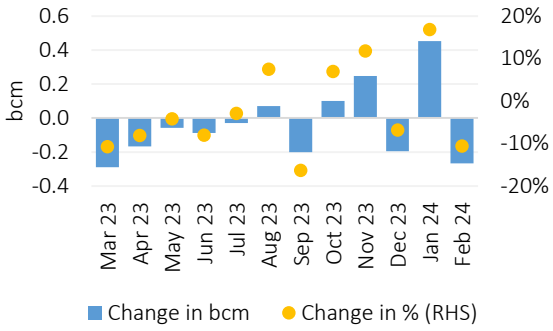
In February 2024, Germany witnessed an 11% y-o-y decrease in gas consumption, with natural gas consumption dropping to 7.7 bcm (Figure 10). This decline spanned across the residential, power generation and industrial sectors (Figure 11). The slowdown in natural gas consumption can be attributed to several factors: milder-than-usual weather conditions, continued efforts to apply gas consumption reduction measures and high renewable energy output in the power generation sector.

Figure 10: Gas consumption in Germany



Source: GECF Secretariat based on data from Refinitiv

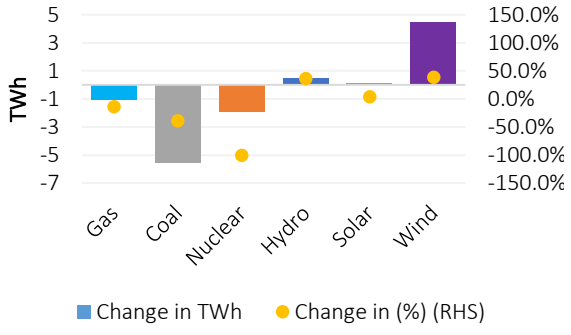
Figure 11: Trend in gas consumption in the industrial sector in Germany (y-o-y change)



Source: GECF Secretariat based on data from Refinitiv

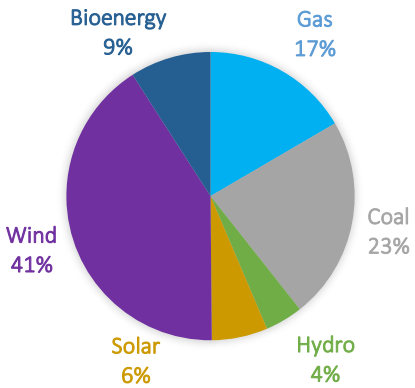
Gas-fired power generation experienced a 14% y-o-y decrease, while overall electricity production declined by 8% y-o-y, totalling 39 TWh. In contrast, hydro, solar, and wind energy generation witnessed significant increases of 36%, 4% and 39% y-o-y, respectively. Meanwhile, electricity production from coal saw a decrease of 39% y-o-y. These shifts were largely attributed to favorable weather conditions that boosted hydro, solar and wind energy generations, along with a greater shift from coal (Figure 12). In the energy mix, renewables continued to dominate with a 56% share, followed by coal at 23%, gas at 17% and hydro at 4% (Figure 13).

Figure 12: Trend in electricity production in Germany in February 2024 (y-o-y change)



Source: GECF Secretariat based on data from Refinitiv and Ember

Figure 13: German electricity mix in January 2024



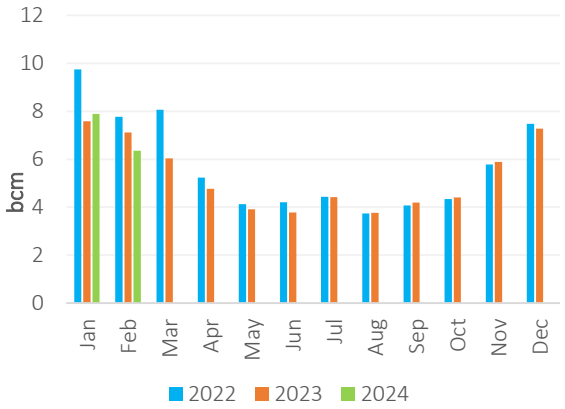
Source: GECF Secretariat based on data from Refinitiv and Ember

From January to February 2024, Germany's overall gas consumption increased by 3.6% y-o-y to reach 19 bcm.

2.1.1.2 Italy

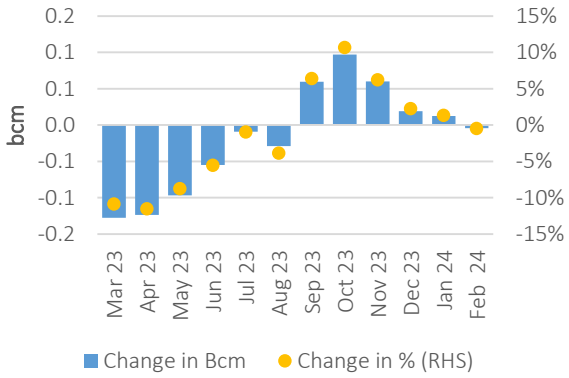
In February 2024, Italy experienced an 11% y-o-y decrease in gas consumption, totalling 6.4 bcm (Figure 14). The residential sector was the primary contributor to this reduction, largely due to the mild weather conditions, with a 13% y-o-y decline in consumption to reach 3.6 bcm. The industrial sector witnessed a modest 0.5% y-o-y decrease, reaching 0.97 bcm, despite the reduction in gas prices. Notably, after five consecutive months of y-o-y growth, the industrial sector recorded its first month of decline in gas consumption (Figure 15).

Figure 14: Gas consumption in Italy



Source: GECF Secretariat based on data from Snam

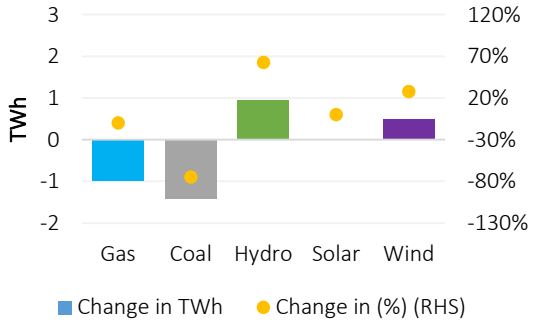
Figure 15: Trend in gas consumption in the industrial sector in Italy (y-o-y change)



Source: GECF Secretariat based on data from Snam

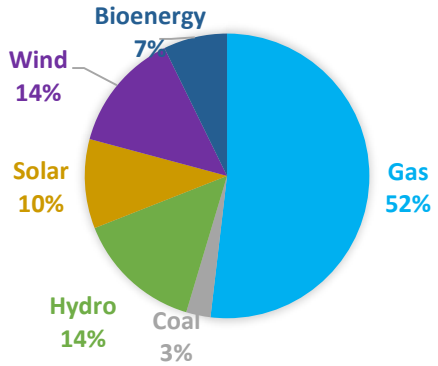
Gas-based electricity production declined by 10% y-o-y, while the total electricity production declined by 5.1% y-o-y, reaching 17 TWh. Additionally, there was a notable y-o-y increase in energy generation from hydro (63%) and wind (28%) (Figure 16). Meanwhile, gas continued to be the dominant fuel in the power mix, accounting for 52% of the total, followed by renewables (31%), hydro (14%) and coal (3%) (Figure 17).

Figure 16: Trend in electricity production in Italy in February 2024 (y-o-y change)



Source: GECF Secretariat based on data from Refinitiv and Ember

Figure 17: Italian electricity mix in February 2024



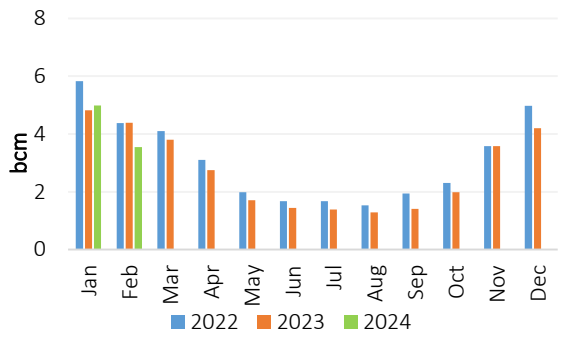
Source: GECF Secretariat based on data from Refinitiv and Ember

From January to February 2024, Italy's overall gas consumption decreased by 3% y-o-y to reach 14 bcm.

2.1.1.3 France

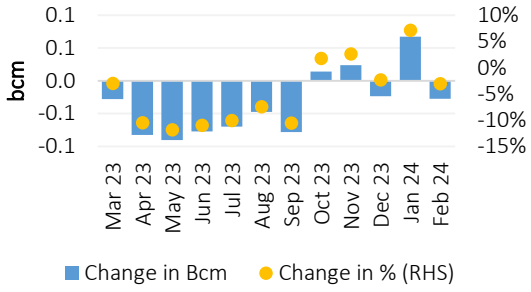
In February 2024, France experienced a significant decline in gas consumption, dropping by 19% y-o-y to 3.5 bcm. This shift marked a return to a negative trend after a rebound in January 2024 (Figure 18). The primary driver of this decline was a dramatic 72% decrease in consumption within the power generation sector, which fell to 0.15 bcm, largely due to the high availability of nuclear production. Additionally, the warm temperatures across the country contributed to a decrease in natural gas consumption in the residential sector, which saw a 14% decline, reaching 2.5 bcm. The industrial sector's gas consumption remained steady at the previous year's level, totalling 0.9 bcm (Figure 19).

Figure 18: Gas consumption in France



Source: GECF Secretariat based on data from GRTgaz

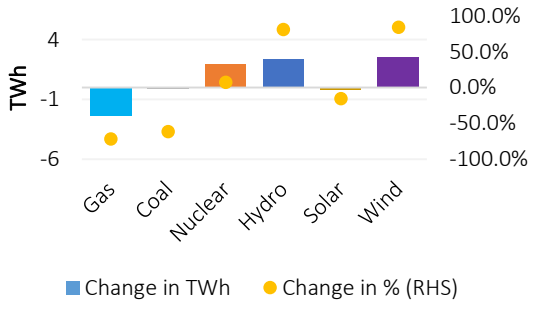
Figure 19: Trend in gas consumption in the industrial sector in France (y-o-y change)



Source: GECF Secretariat based on data from GRTgaz

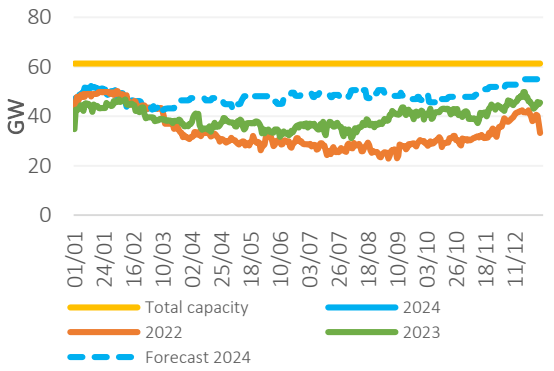
Electricity production from gas in France experienced a 72% y-o-y decrease, while the country's total electricity production saw a 10% y-o-y increase, reaching 45 TWh. A significant rebound in nuclear power generation occurred this month, rising by 7% y-o-y. The availability of nuclear capacity increased by 5% y-o-y (Figure 21). Additionally, electricity production from hydro and wind witnessed substantial increases of 80% and 84% y-o-y, respectively. In contrast, electricity production from coal and solar plummeted by 62% and 16% y-o-y, respectively (Figure 20). It is important to note that the decline in solar production in France was a result of a 35% sunshine deficit in February, as reported by Météo France. In France's energy mix, nuclear power continued to be the dominant source, accounting for a 68% share, followed by renewables (15%), hydro (12%) and gas (5%).

Figure 20: Trend in electricity production in France in February 2024 (y-o-y change)



Source: GECF Secretariat based on data from Ember

Figure 21: French nuclear capacity availability



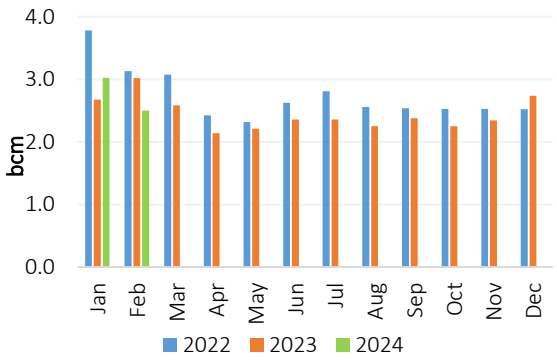
Source: GECF Secretariat based on Refinitiv and RTE

In the first two months of 2024, gas consumption dropped by 7% y-o-y to reach 8.5 bcm.

2.1.1.4 Spain

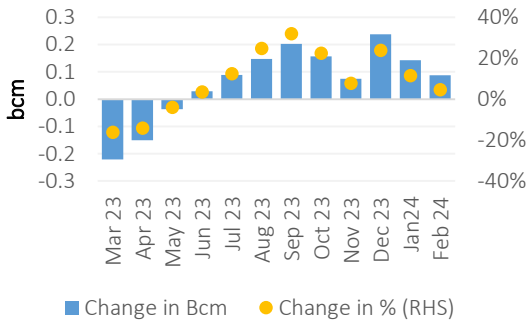
In February 2024, Spain witnessed a 17% y-o-y decrease in gas consumption, reaching 2.5 bcm (Figure 22). This decline was primarily attributed to reduced gas usage in the residential and power generation sectors. The residential sector experienced a notable decrease in gas consumption due to the warm temperatures. Additionally, the power generation sector continued its downward trend, influenced by increased production from hydro, wind, and solar energy sources, coupled with the cessation of electricity exports to France. In contrast, the industrial sector marked its ninth consecutive month of expansion, with a 4.6% y-o-y increase (Figure 23). This growth was driven by increased gas consumption across various industries, notably in refineries, with a 34% y-o-y increase, and pharmaceuticals, with a 24% increase.

Figure 22: Gas consumption in Spain



Source: GECF Secretariat based on data from Enagas

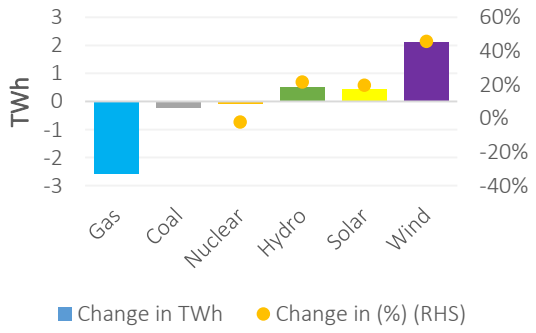
Figure 23: Trend in gas consumption in the industrial sector in Spain (y-o-y change)



Source: GECF Secretariat based on data from Enagas

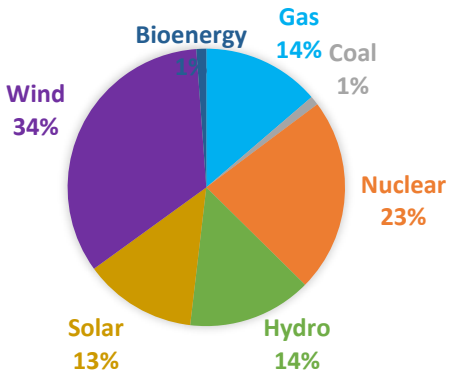
Electricity generation from gas experienced a 48% y-o-y decrease, while the overall electricity production in the country rose by 0.5% y-o-y, totalling 20 TWh. Additionally, there were notable reductions in electricity production from coal and nuclear sources, decreasing by 51% and 2% y-o-y, respectively. In contrast, increases were observed in electricity generation from hydro (22% y-o-y), solar (13%) and wind (34%) (Figure 24). Renewables maintained the dominant position in the power mix, accounting for 48% of the total, followed by nuclear (23%), gas (14%), hydro (14%) and coal (1%) (Figure 25).

Figure 24: Trend in electricity production in Spain in February 2024 (y-o-y change)



Source: GECF Secretariat based on data from Ember and Ree

Figure 25: Spanish electricity mix in February 2024



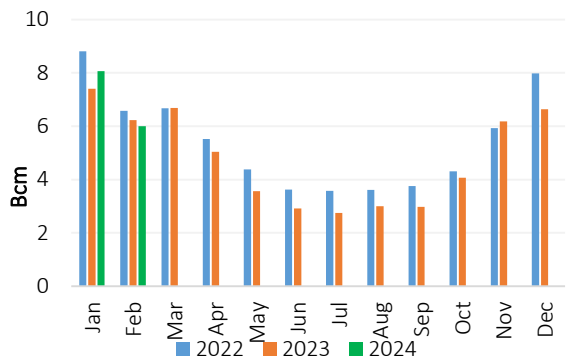
Source: GECF Secretariat based on data from Ember and Ree

From January to February 2024, Spain's overall gas consumption decreased by 3% y-o-y to reach 5.5 bcm.

2.1.2 United Kingdom

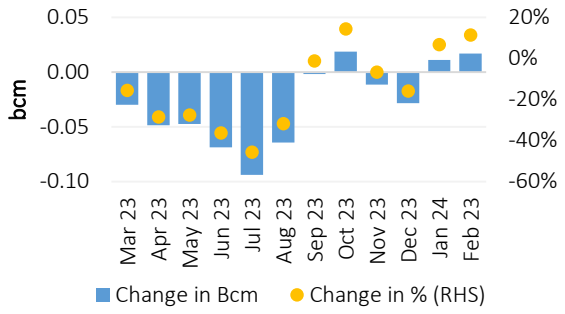
In February 2024, following a first recovery in gas consumption in the previous month, the UK experienced a return to a decreasing trend in gas consumption, recording a 3.6% y-o-y decline, with a total of 6 bcm (Figure 26). This decline was observed in the power generation sectors, with a decline of 18% y-o-y (Figure 27). However, the industrial and residential sectors recorded a growth of 11% and 0.5% y-o-y, respectively. Factors contributing to this increase included colder than usual temperatures during the month, and a recovery in the industrial sector following a drop in natural gas prices.

Figure 26: Gas consumption in the UK



Source: GECF Secretariat based on data from Refinitiv

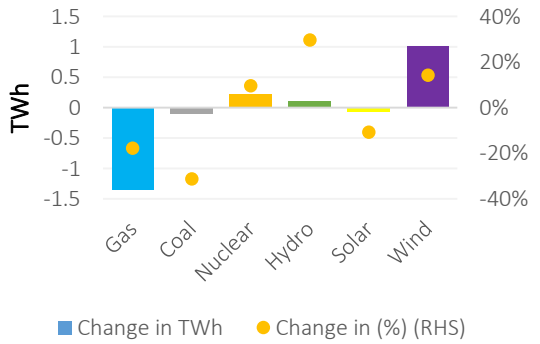
Figure 27: Trend in gas consumption in the industrial sector in the UK (y-o-y change)



Source: GECF Secretariat based on data from Refinitiv

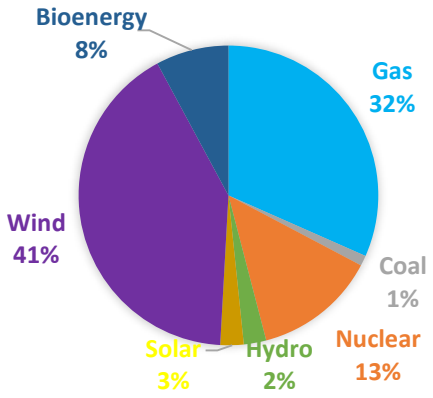
In the UK, electricity production from gas witnessed a 18% y-o-y decrease, while total electricity production rose by 0.9% y-o-y to 20 TWh. Electricity generation from coal and solar sources fell by 31% and 11% y-o-y, respectively. In contrast, nuclear, hydro and solar energy production experienced a significant increase, by 10%, 30% and 14% y-o-y, respectively (Figure 28). In the power mix, renewables take the lead, comprising 52% of the total electricity production, followed by gas at 32%, nuclear at 13%, hydro at 2% and coal at 1% (Figure 29).

Figure 28: Trend in electricity production in UK in February 2024 (y-o-y change)



Source: GECF Secretariat based on data from Refinitiv

Figure 29: UK electricity mix in February 2024



Source: GECF Secretariat based on data from Refinitiv

From January to February 2024, UK's overall gas consumption increased by 3% y-o-y to reach 14 bcm.

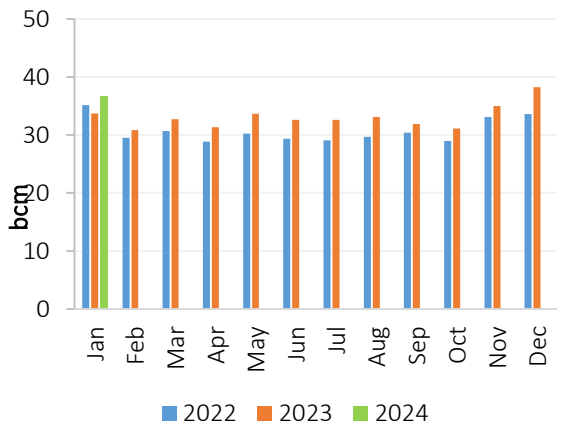
2.2 Asia

2.2.1 China

In January 2024, China's apparent gas demand, which includes pipeline imports, LNG imports, and domestic production, rose by 8.7% compared to the previous year, reaching 37 bcm (Figure 30). This increase in gas consumption is attributed to the cold spell and the revival of economic activities following the decline in natural gas prices.

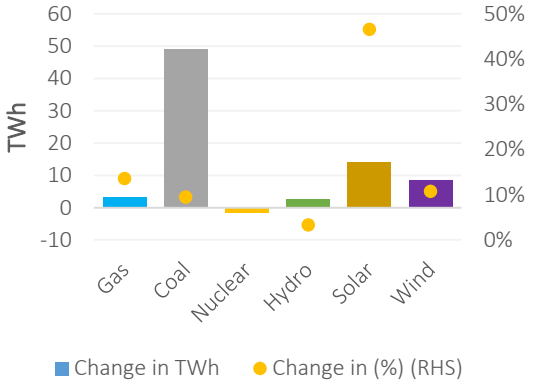
Electricity production from gas in China increased in December 2023 by 14% y-o-y, while the total electricity production rose by 10%, reaching 862 TWh. The month witnessed a significant surge in electricity generation from hydro (3%), solar (47%), wind (11%) and coal (9%) (Figure 31). Coal remained the dominant fuel in the power mix, accounting for 66% of the total, followed by renewables (18%), hydro (9%), nuclear (4%) and gas (3%).

Figure 30: Gas consumption in China



Source: GECF Secretariat based on data from Refinitiv

Figure 31: Trend in electricity production in China in in December 2023 (y-o-y change)



Source: GECF Secretariat based on data from Ember

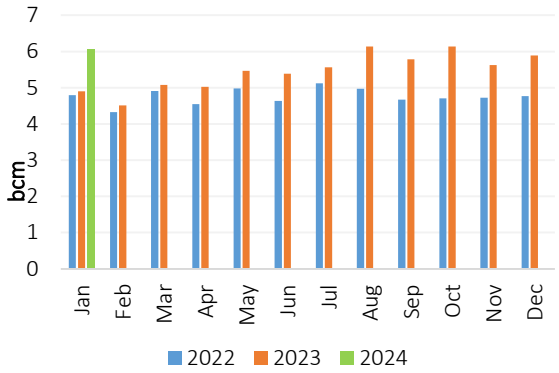
2.2.2 India

In January 2024, India's gas consumption marked its thirteenth consecutive month of growth, with a 24% y-o-y increase, reaching 6 bcm (Figure 32). This increase was driven by the fertilizer, power generation, city gas, refinery and petrochemical sectors, which registered growth rates of 14%, 15%, 17%, 60% and 32% y-o-y, respectively, amidst declining gas prices. LNG imports accounted for 49% of the country's total gas consumption.

In the sectoral breakdown, the fertilizer sector accounted for 32% of gas demand, followed by city gas distribution (20%), power generation (13%), refining (8%) and the petrochemical sector (4%) (Figure 33).

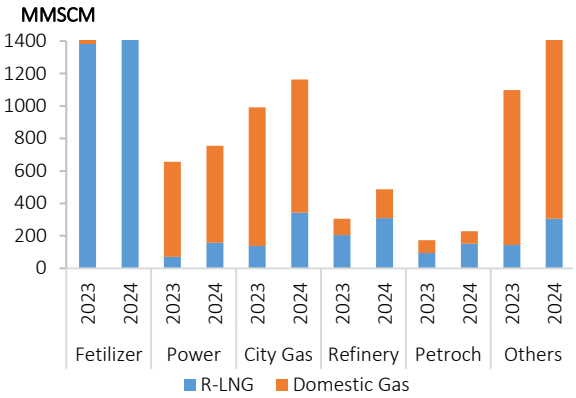
Total power generation surged to 144 TWh, marking a 5.7% y-o-y increase. Indian gas-based power utilities have operated at their optimal capacity to address an expected increase in power demand, the power ministry prolonged the duration of its previous instructions for utilities to direct gas-based utilities to function at maximum capacity.

Figure 32: Gas consumption in India



Source: GECF Secretariat based on data from PPAC

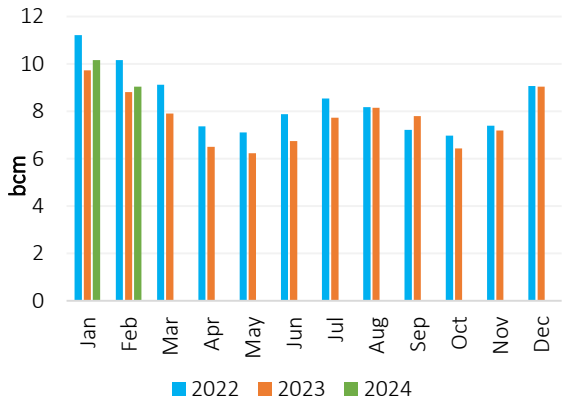
Figure 33: India's gas consumption by sector in Jan



2.2.3 Japan

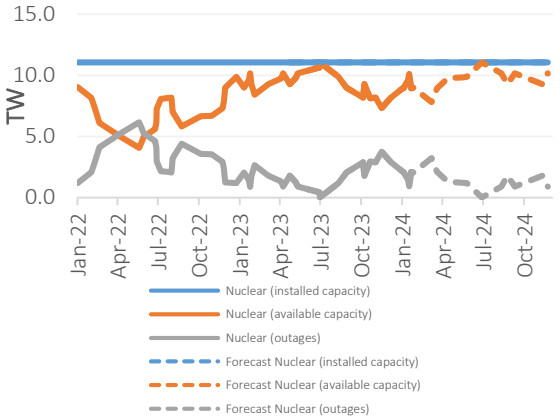
In February 2024, Japan experienced a 2.7% y-o-y increase in gas consumption, totalling 9 bcm (Figure 34). This rise was mainly driven by increased demand in the power generation sector due to the cold weather. Specifically, the power generation sector experienced a 6.5% y-o-y growth, reaching 4.9 bcm. On the other hand, the city gas sector witnessed a 1.5% y-o-y decline in consumption. The month also saw an 8% y-o-y reduction in Japan's Heating Degree Days (HDD), a measure of heating demand, which averaged 8.8. This suggests a greater heating requirement compared to the previous year. Additionally, the availability of nuclear power was 14% lower than in the same month of the previous year, contributing to an increased reliance on gas for power generation (Figure 35).

Figure 34: Gas consumption in Japan



Source: GECF Secretariat based on data from Refinitiv

Figure 35: Nuclear availability in Japan

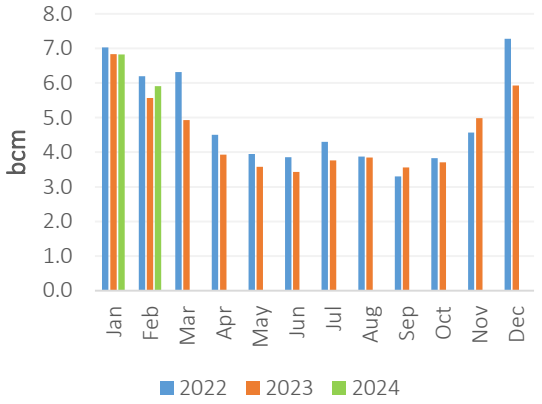


Source: GECF Secretariat based on data from Refinitiv

2.2.4 South Korea

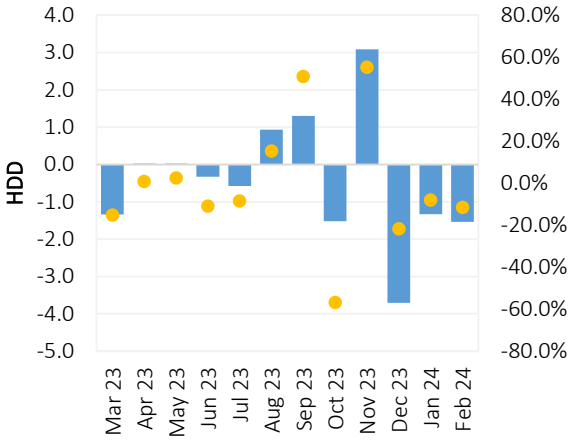
In February 2024, gas consumption in South Korea experienced an increase of 6.2% compared to the previous year, reaching 5.9 bcm (Figure 36). This growth was primarily attributed to a rise in gas consumption in the power generation and city gas sectors. The Heating Degree Days (HDD) for South Korea decreased by 12% y-o-y. This indicated a reduced demand for heating relative to the prior year (Figure 37).

Figure 36: Gas consumption in South Korea



Source: GECF Secretariat based on data from Refinitiv

Figure 37: HDD in South Korea (y-o-y change)



Source: GECF Secretariat based on data from Refinitiv

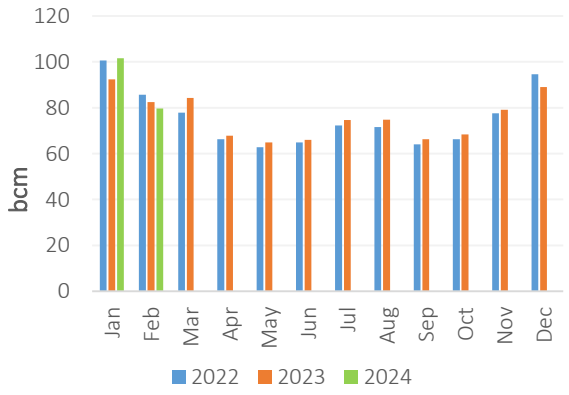
2.3 North America

2.3.1 US

In February 2024, the US experienced a 3.4% y-o-y decline in gas consumption, reaching 80 bcm. The mild weather significantly reduced gas demand for heating in the residential, commercial and power generation sectors, with a drop of 7%, 12% and 2% y-o-y, respectively. Likewise, the industrial sector witnessed a 1.5% drop in gas consumption.

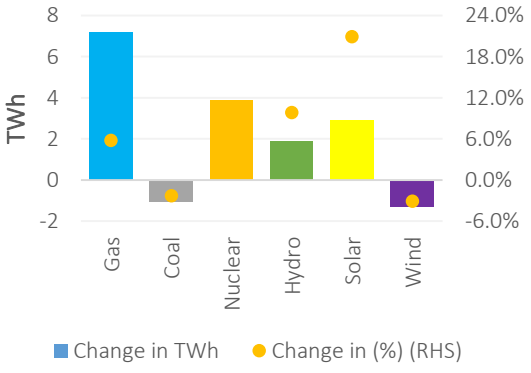
Electricity generation from gas experienced a 6% y-o-y increase, whereas the overall electricity production rose by 4%. The month was marked by a rise in generation from nuclear, hydro and solar, which increased by 6%, 10% and 21%, respectively. On the other hand, coal and wind energy production experienced a decline of 2% and 3% y-o-y, respectively (Figure 39). In the power mix, gas continued to lead with a 41% share, followed by nuclear (20%), renewable (19%), coal (14%) and hydro (6%).

Figure 38: Gas consumption in the US



Source: GECF Secretariat based on data from EIA and Refinitiv

Figure 39: Electricity production in the US in February 2024 (y-o-y change)

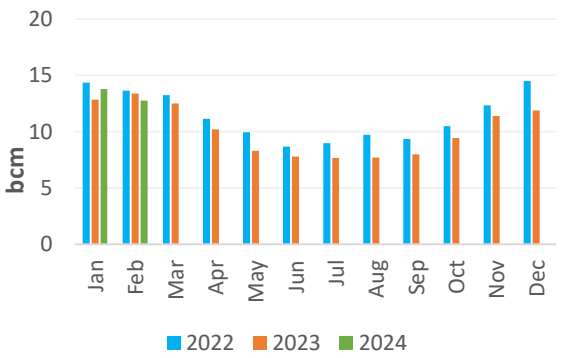


Source: GECF Secretariat based on data from Ember and Refinitiv

2.3.2 Canada

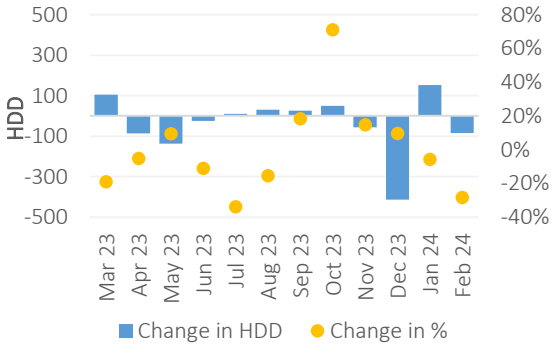
In February 2024, Canada experienced a 4.5% y-o-y decrease in gas consumption, to reach 12.8 bcm (Figure 40). This drop was mainly due to a warm weather which implied reduction in gas usage in the residential, commercial and combined industrial and power generation sectors by 12%, 13% and 2.4% y-o-y, respectively. The Heating Degree Days (HDD) in Canada averaged 1142 for February, indicating a 7% y-o-y decrease (Figure 41).

Figure 40: Gas consumption in Canada



Source: GECF Secretariat based on data from Refinitiv

Figure 41: HDD in Canada (y-o-y change)



Source: GECF Secretariat based on data from Refinitiv

2.4 Weather Forecast

The weather and precipitation conditions have a significant impact on gas consumption. Below normal temperatures in winter and above normal temperatures in summer boost heating and cooling demand, respectively. Additionally, below normal precipitation levels result in lower hydro output, which can increase gas demand in the power generation sector.

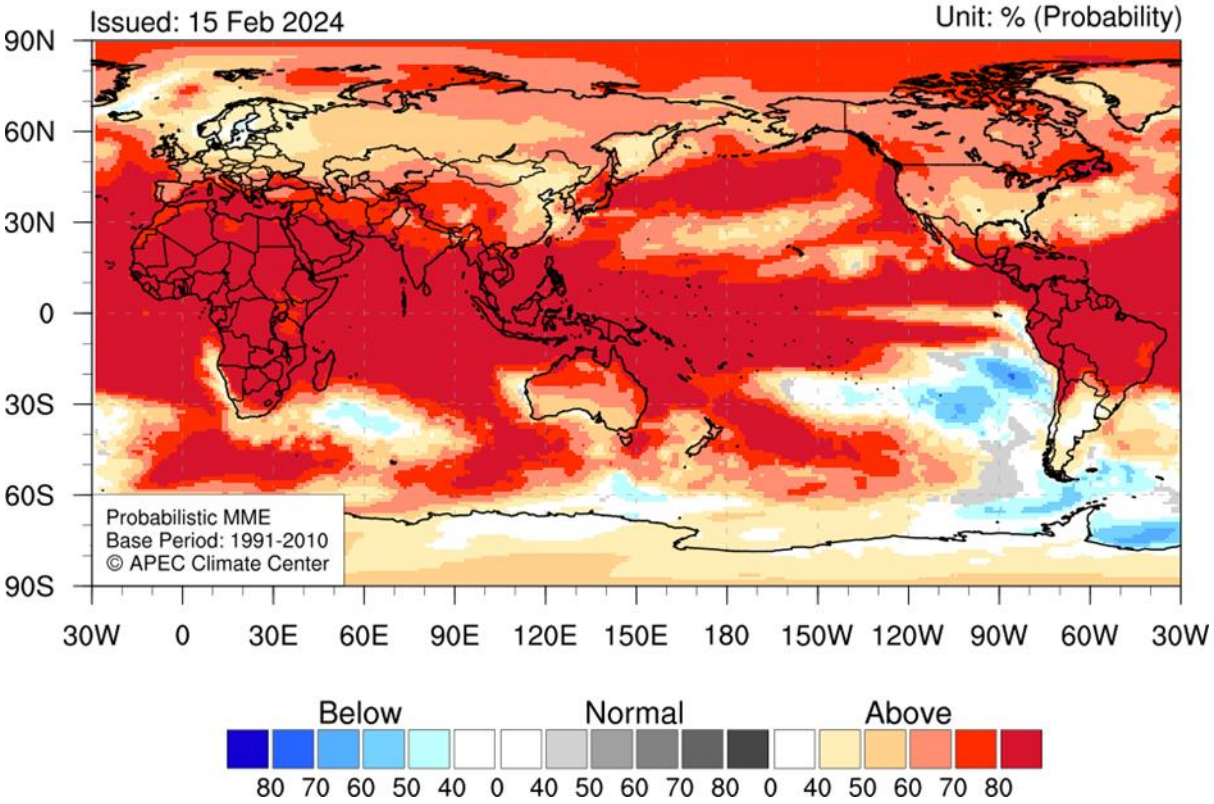
2.4.1 Temperature Forecast for March to May 2024

According to the Climate Outlook by the APEC Climate Center published on 15 February 2024, a pronounced likelihood of experiencing above normal temperatures is predicted for most of the globe (excluding some region of the southeastern South Pacific and the Antarctic Ocean between South America and the Antarctic) for the period March to May 2024 (Figure 42).

2.4.2 Precipitation Forecast for March to May 2024

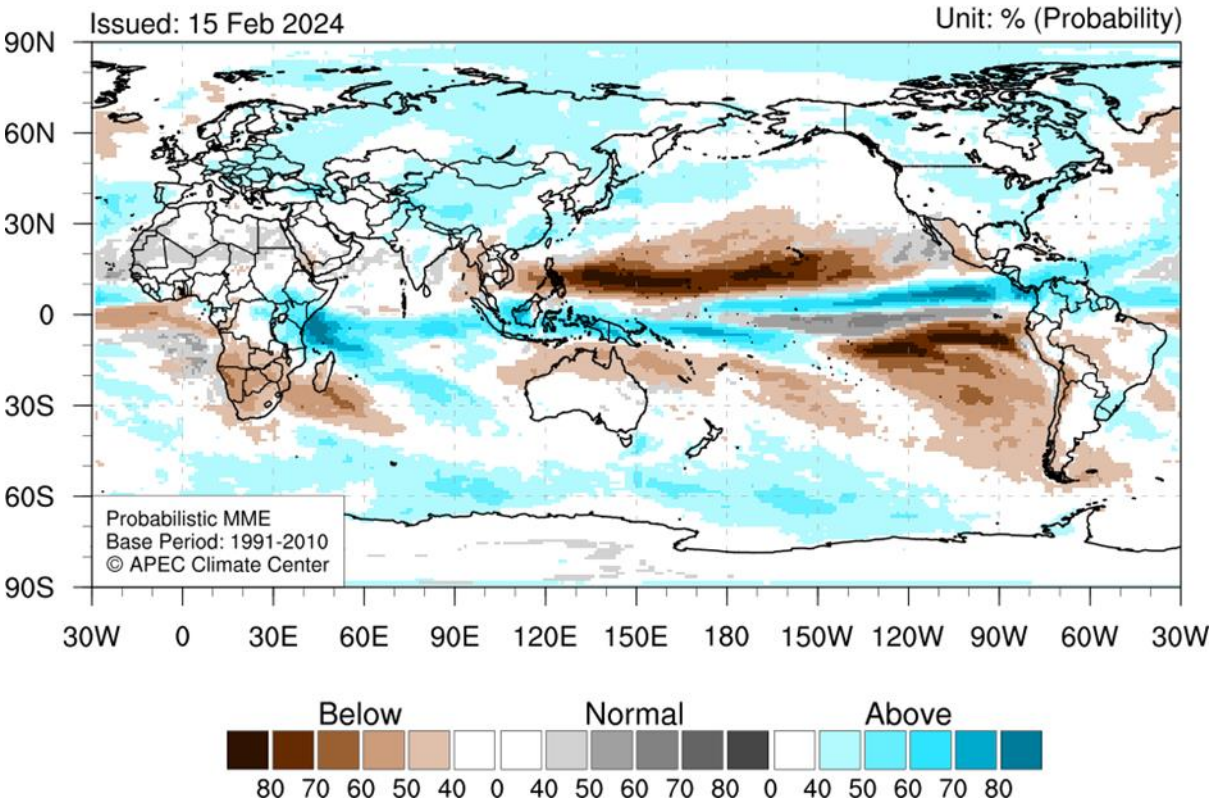
According to the same source, above normal precipitation is expected for the western equatorial Pacific, off-equatorial North Pacific, the western Indian Ocean, the southern Indian Ocean and Indonesia. While below normal precipitation is expected for the central and western off-equatorial North Pacific, eastern off-equatorial South Pacific, the eastern Indian Ocean, western tropical South Pacific, off-equatorial Atlantic, and southern Africa and Australia for the period March to May 2024 (Figure 43).

Figure 42: Temperature forecast March to May 2024



Source: APEC Climate Center

Figure 43: Precipitation forecast March to May 2024



Source: APEC Climate Center

3 Gas Production

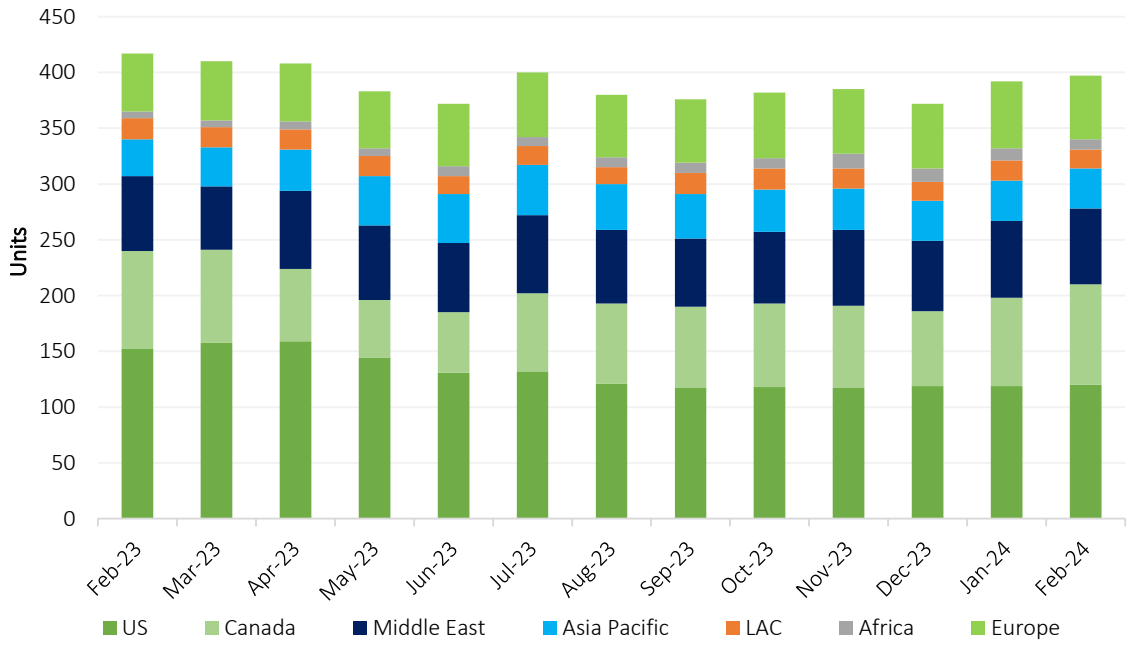
3.1 Global

The 2023 global gas production data indicated a modest rise of 0.8% to reach 4,081 bcm. This increase mainly took place in regions such as North America, the Middle East and Asia Pacific, while production in Europe and the CIS regions declined. Non-GECF countries are estimated to raise their gas production by 2%, amounting to 2,379 bcm. The US is estimated to register growth of 43 bcm compared to 2022 production levels, largely due to increased associated gas production from shale oil fields. Additionally, the Middle East is estimated to witness a notable increase in gas production of 13 bcm, with Iran, Qatar and Saudi Arabia as the primary contributors.

In 2024, global gas production is estimated to increase by 115 bcm to reach 4196 bcm. This increase is expected to originate mainly from the growth of the Russian gas production, driven by new projects start-ups. In addition, the growth in the US gas production is estimated to continue driving global growth, with the main source of increase originating from the associated gas production from shale oil plays.

February 2024 witnessed a m-o-m rise of 5 units in the global number of gas drilling rigs, reaching 397 rigs. This signed a monthly back -to-back increase in the gas drilling rigs after the 20-rig surge in January 2024, indicating an intensification for the upstream operations. However, this marked a decrease from the 417 rigs recorded in February 2023. The m-o-m growth resulted from a rise in gas rigs throughout Canada and the US, while Europe, Africa and Latin America marked a slight decrease of 3, 2 and 1 rigs, respectively (Figure 44).

Figure 44: Trend in monthly global gas rig count



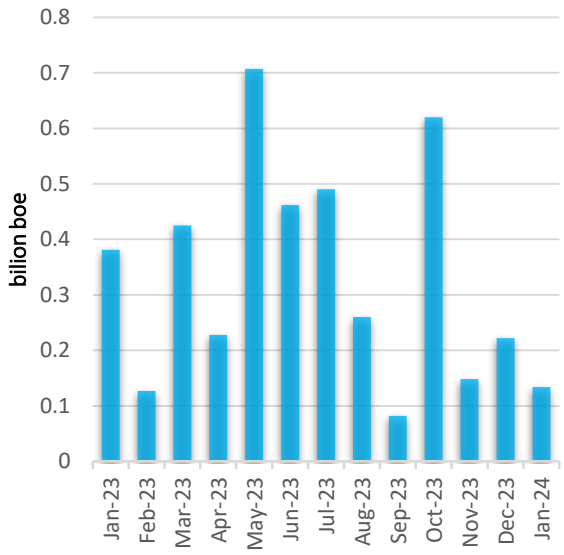
Source: GECF Secretariat based on data from Baker Hughes
Note: Excludes data for Eurasia and Iran

In January 2024, the total volume of discovered gas and liquids amounted to 134 million barrels of oil equivalent (boe). Of this, liquid oil accounted for the majority with 84% (112 million boe), while natural gas constituted 16% (4 bcm). With this result, 2024 was off to a slow start in its exploration activity, compared to 380 million boe discovered in January 2023 (Figure 45). Approximately 90% of the total discoveries were made offshore and dominated by the Mopane oil discovery offshore Namibia.

Six discoveries were announced in January 2024, three of which were offshore. Africa dominated the new discovered volumes with 79%, mainly in Namibia's prolific offshore activities, while Asia Pacific had 21% of the discoveries. No significant discoveries were reported in LAC, the Middle East and North America (Figure 46).

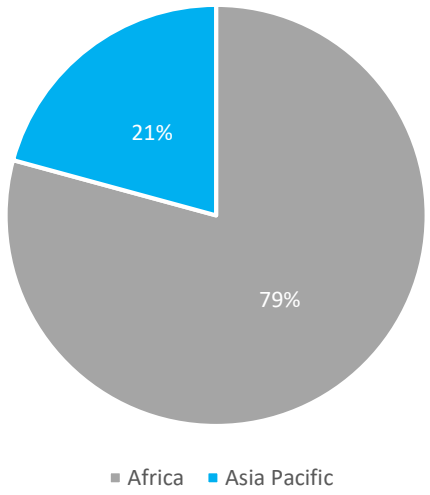
Uktal gas discovery, in the Mahanadi basin, offshore India, was the largest gas discovery announced in January 2024. The discovery was made through the exploration well Uktal-1 in the block MN-DWHP-2018/1. According to ONGC, the well was drilled at water depth of 714m and successfully flow tested with 10 mmcf/d. With this discovery ONGC has managed to prove the presence of hydrocarbon in the high-risk deep-water area in the Mahanadi basin. This opened the gate for another gas discovery in the basin, with well drilled at water depth of 1110m. The two discoveries are estimated to contain about 4 bcm of recoverable gas reserves. It is worth nothing that the exploration in this block came only after the Indian government removed in 2022 the restriction on the activities in 98% of the no-go areas.

Figure 45: Monthly gas and liquid discovered volumes



Source: GECF Secretariat based on Rystad Energy Ucube

Figure 46: Discovered volumes in January 2024 by region

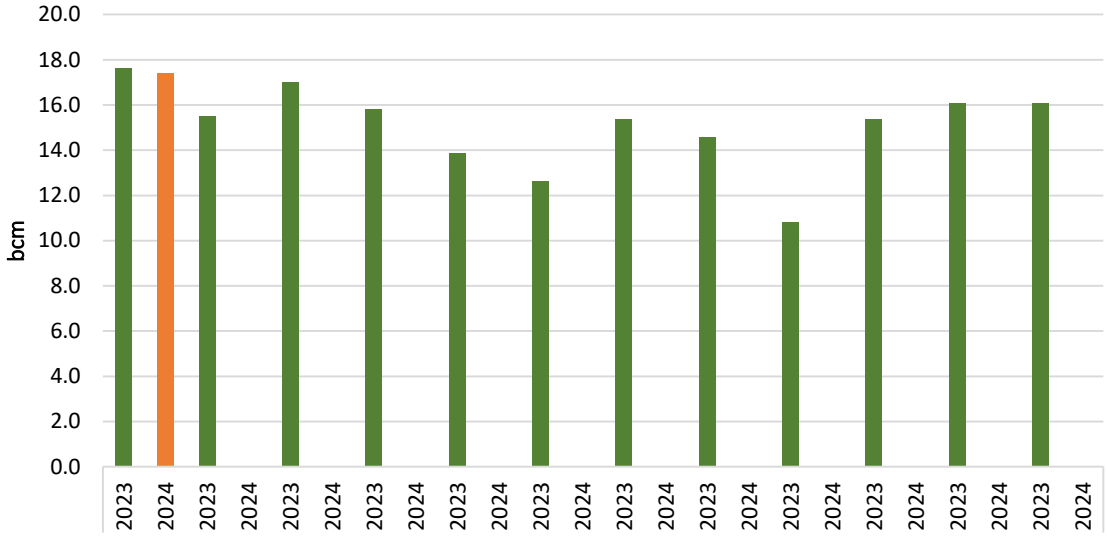


Source: GECF Secretariat based on Rystad Energy Ucube

3.2 Europe

In January 2023, Europe experienced a 1.2% y-o-y decline in gas production, resulting in a total output of 17.4 bcm (Figure 47). This reduction primarily stemmed from lower production levels in the Netherlands and the UK, which alongside Norway, are the main contributors to the region's gas output. The decline was relatively constrained by Norway's rising gas production.

Figure 47: Europe's monthly gas production



Source: GECF Secretariat based on data from Refinitiv, and Norwegian Petroleum Directorate
**Europe's production: UK, the Netherlands, Norway, Germany, Italy, Poland, Denmark, Austria and Romania*

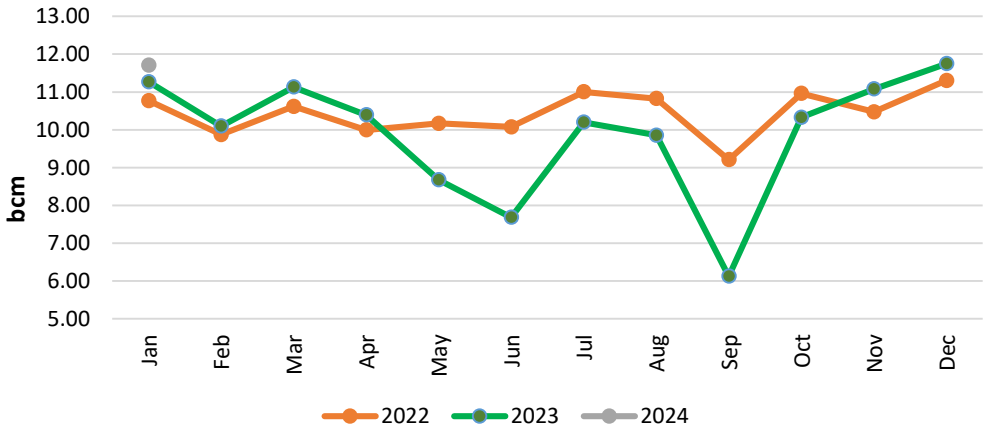
3.2.1 Norway

Preliminary data from the Norwegian Petroleum Directorate showed that Norway's gas production in January 2024 increased by 5% compared to the previous year, achieving 11.71 bcm (Figure 48).

Notably, Equinor was awarded 39 new production licences by the Ministry of Energy in this year's Awards in Predefined Areas (APA). 18 production licences were awarded in the Norwegian Sea, 8 in the North Sea and the rest in the Barents Sea. The company reaffirmed its position to continue exploration activity in the Norwegian Continental Shelf, to reduce the production decline and contribute to European energy security.

Regarding maintenance activities in February 2024, a short unplanned outage in the 25.4 mcm/d Aasta Hansteen gas field reduced its output capacity to 6.9 mcm/d for 1 day. In addition, the field is forecasted to undergo a planned maintenance in April 2024 for a period of 7 days.

Figure 48: Trend in gas production in Norway



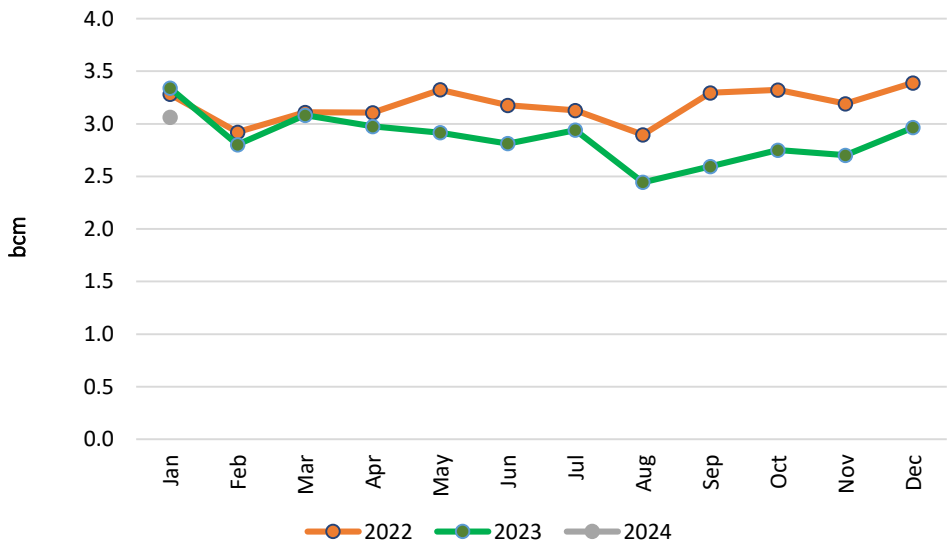
Source: GECF Secretariat based on data from Refinitiv and Norwegian Petroleum Directorate

3.2.2 UK

In January 2024, the UK recorded a 2.5% y-o-y drop in gas production to reach 3.1 bcm (Figure 49). However, this output level represented a 3.3% increase, compared to December 2023.

Regarding maintenance activities in February 2024, a short unplanned offshore outage in the 11.2 mcm/d Bacton Perenco gas terminal reduced its output capacity to 8 mcm/d for 1 day, according to data from GBREMIT.

Figure 49: Trend in gas production in the UK



Source: GECF Secretariat based on data from Refinitiv

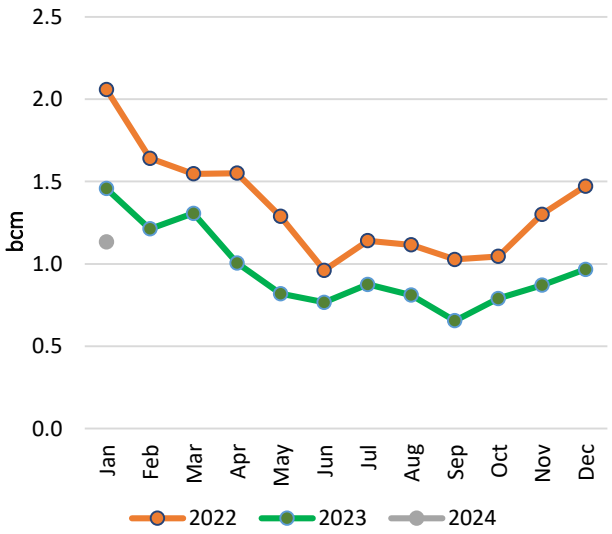
3.2.3 Netherlands

In January 2024, the Netherlands experienced a substantial 29% y-o-y decline in gas production, with a recorded output of 0.9 bcm (Figure 50).

This decrease in gas production is mainly due to reduced output from ageing fields and the cessation of production at the Groningen field.

Notably, in February 2024, Petrogas E&P Netherlands, along with the partners EBN, Rockrose and TAQA announced the production of the first gas from the A15 development project in the Dutch North Sea. This step would give a boost for the declining Dutch domestic gas production.

Figure 50: Trend in gas production in the Netherlands



Source: GECF Secretariat based on data from Refinitiv, Dutch Central Bureau of Statistics

3.3 Asia Pacific

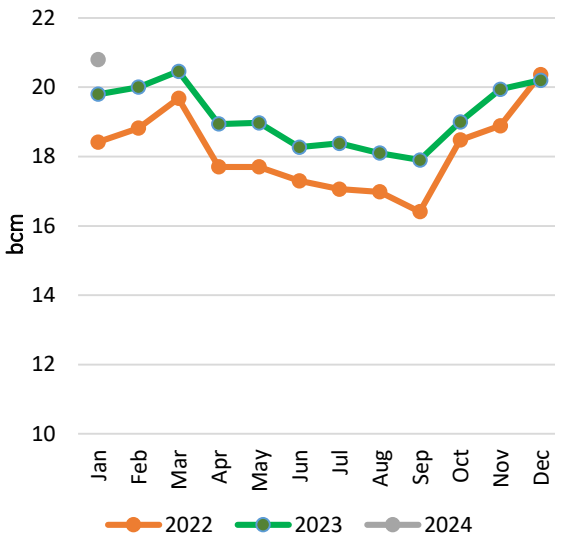
3.3.1 China

China's gas production maintained its sustained growth in 2023, to reach 209 bcm with 4% y-o-y rise after December 2023 recorded a gas output of 20.2 bcm (Figure 51). Notably, the National Bureau of Statistics of China announced that the gas production output in January 2024 reached 20.8 bcm as a monthly average level for the beginning of the year, with a 5.9% y-o-y rise.

In February 2024, Sinopec announced that production has started from the West Sichuan gas field, with annual production of 2bcm. It is worth noting that the field is estimated to contain up to 100 bcm of proven reserves. In addition, the field is expected to produce 0.13 Mtpa of sulphur.

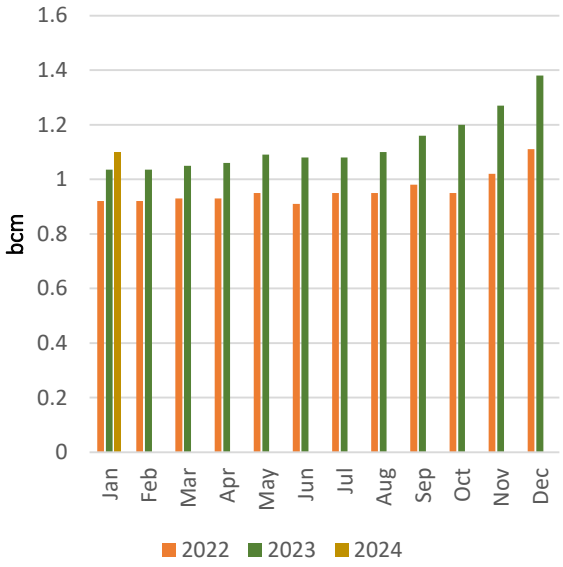
In addition, China's coal bed methane gas production continued its growth to reach 1.38 bcm, with a 24% y-o-y increase and more than 8.7% m-o-m, compared to November 2023 output (Figure 52). China's CBM output in 2023 reached 20.3 bcm, with an annual growth of 42%, driven by the commissioning of the new CBM production projects. In 2024, this growth is estimated to continue, but with a slower pace.

Figure 51: Trend in gas production in China



Source: GECF Secretariat based on data from Refinitiv

Figure 52: Trend in CBM production in China

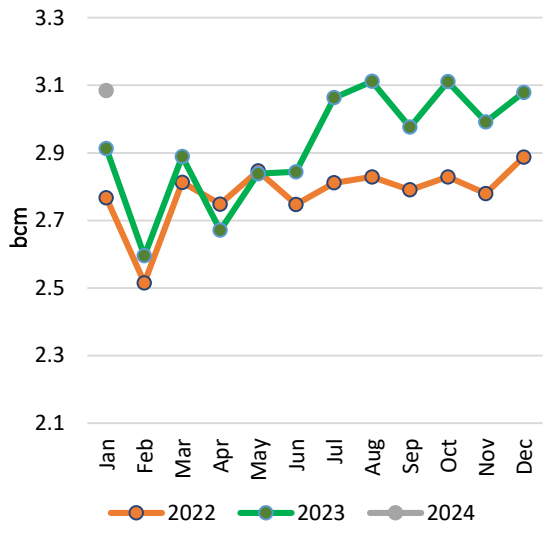


Source: GECF Secretariat based on data from the National Bureau of Statistics of China

3.3.2 India

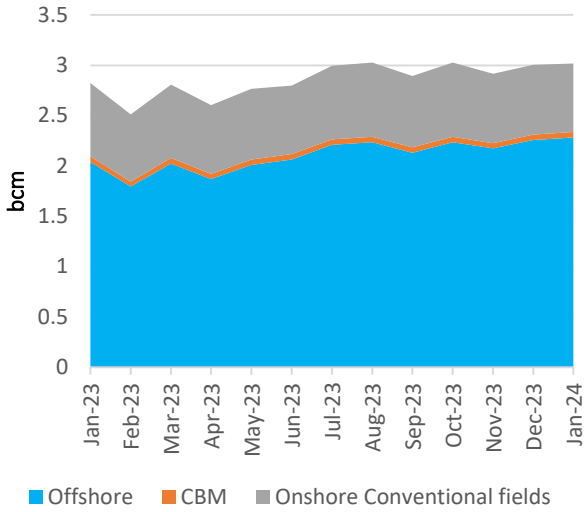
In January 2024, India saw its gas production increase by 6% compared to the previous year, reaching 3.1 bcm (Figure 53). In terms of distribution, the offshore gas fields output reached 2.28 bcm in January 2024, with an 11.8% y-o-y rise. The conventional onshore gas field witnessed a 6.8% decline y-o-y, while coal bed methane production was similar to the previous year (Figure 54).

Figure 53: Trend in gas production in India



Source: GECF Secretariat based on data from Refinitiv, Ministry of Petroleum (India)

Figure 54: Distribution of gas production in India

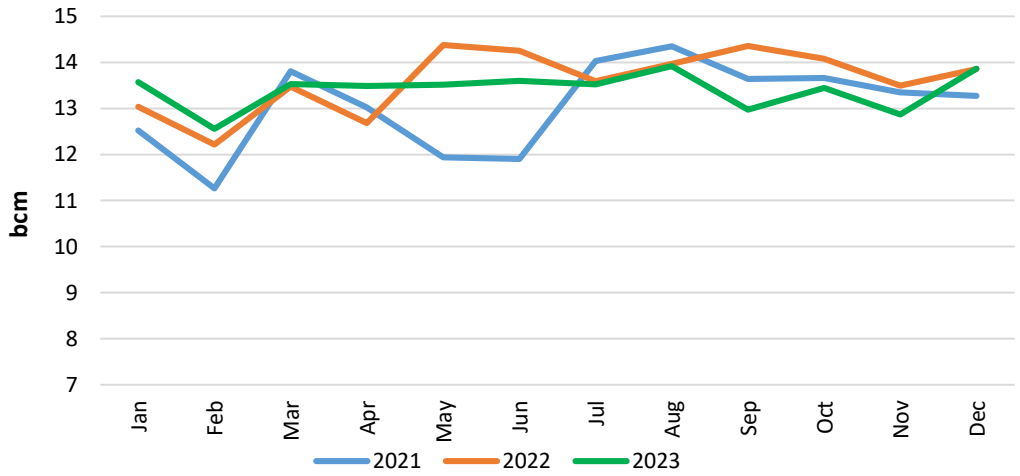


Source: GECF Secretariat based on data from Refinitiv

3.3.3 Australia

According to the Australian Department of Energy data, the country's gas production in December 2023 reached 13.9 bcm, representing a 7% y-o-y rise, similar to the November 2023 production level (Figure 55). In 2023, the cumulative gas production in Australia reached about 160.8 bcm, representing about 6.9% increase y-o-y.

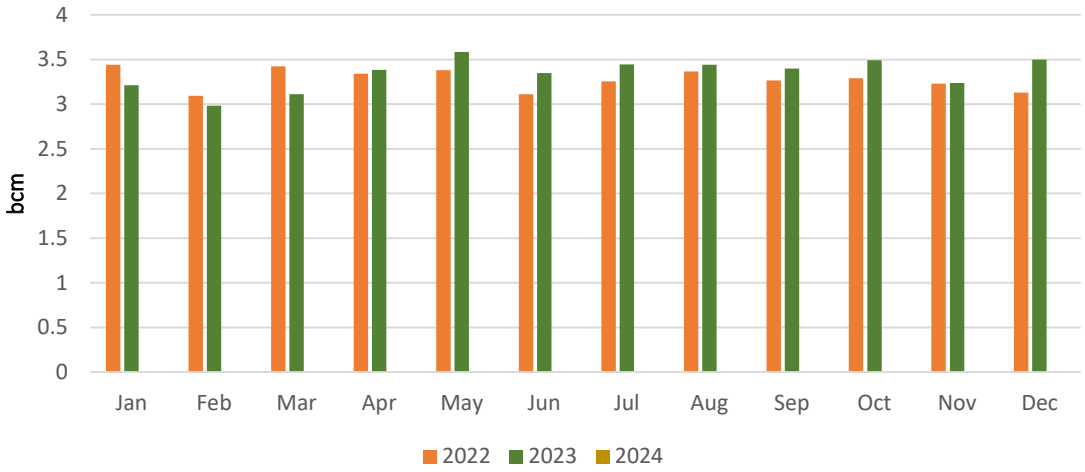
Figure 55: Trend in gas production in Australia



Source: GECF Secretariat based on data from the Australian Department of Energy

Natural gas production from coal bed methane fields reached 3.5 bcm, representing 26% of the total production, with an 8% m-o-m increase. These production volumes have maintained Australia as a global frontrunner in coal bed methane production (Figure 56).

Figure 56: Trend in CBM production in Australia



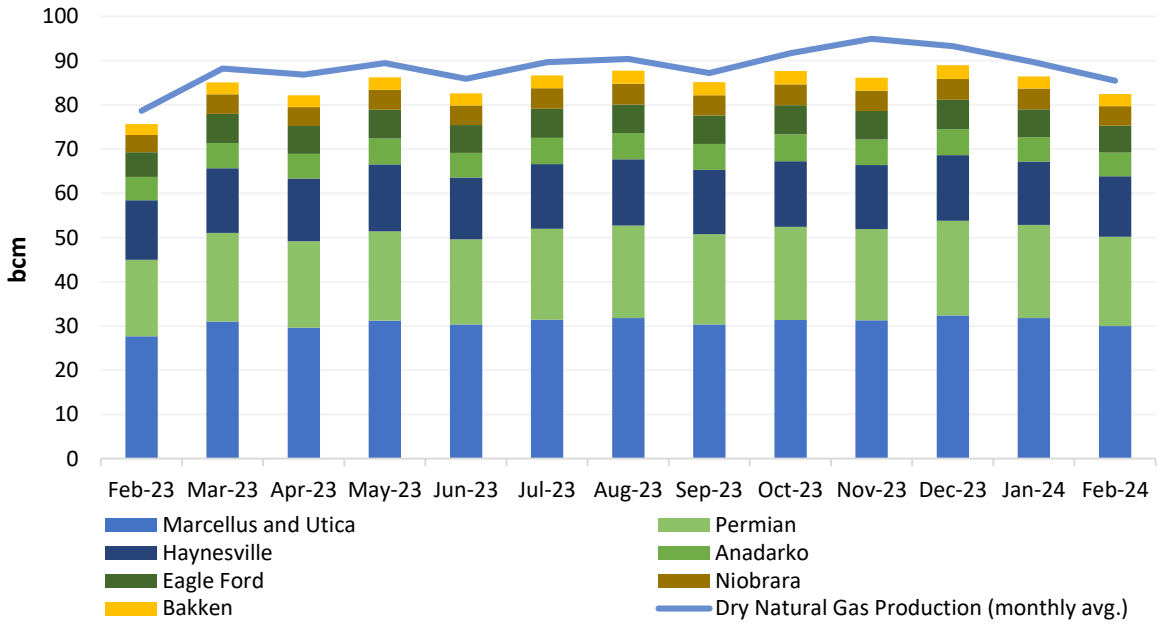
Source: GECF Secretariat based on data from the Australian Department of Energy

3.4 North America

3.4.1. US

In February 2024, the key shale gas-producing regions in the US - Anadarko, Appalachian, Bakken, Eagle Ford, Haynesville, Niobrara and Permian regions - experienced a 5% y-o-y production growth, reaching a total of 82.5 bcm (Figure 57). The Appalachian region, which includes the Marcellus and Utica shale formations, accounted for 36% of this total production. Additionally, the Permian shale oil field saw its associated gas production rise by 12.5% y-o-y, totalling 20.2 bcm and representing 25% of the total shale gas production. Total dry gas production reached 85.8 bcm, with 4.8% y-o-y growth.

Figure 57: Trend in shale gas production in the US shale oil/gas producing regions



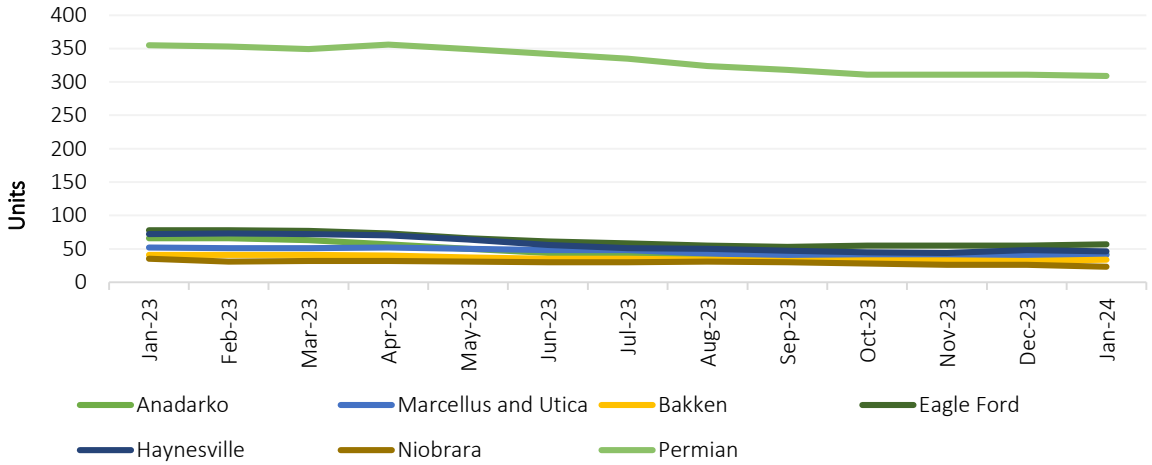
Source: GECF Secretariat based on data from Refinitiv, EIA

As of January 2024, the number of oil and gas drilling rigs operating in the seven key shale oil and gas regions in the US was 552. This represented a decrease of 3 rigs since December 2023 and a decrease of 147 rigs from January 2023 (Figure 58). The Permian basin accounted for the major share of the drilling rigs with more than 56%.

Additionally, in January 2024, the total number of drilled but uncompleted (DUC) wells in the seven major regions amounted to 4,386, marking a decrease of 13 wells compared to the count in December 2023 (Figure 59).

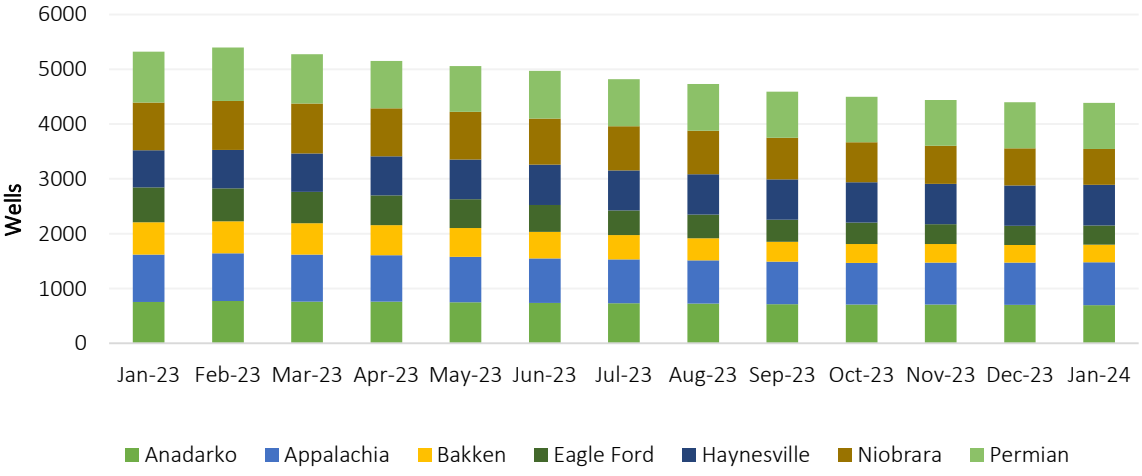
The Drilling Productivity Report for February 2024, released by the EIA, highlighted a 3.2% monthly rise and 10% yearly rise in new well gas production per rig (Figure 60). Consequently, the average daily gas production per rig across all regions increased to 5,939 thousand cubic feet.

Figure 58: US shale region oil and gas rig count



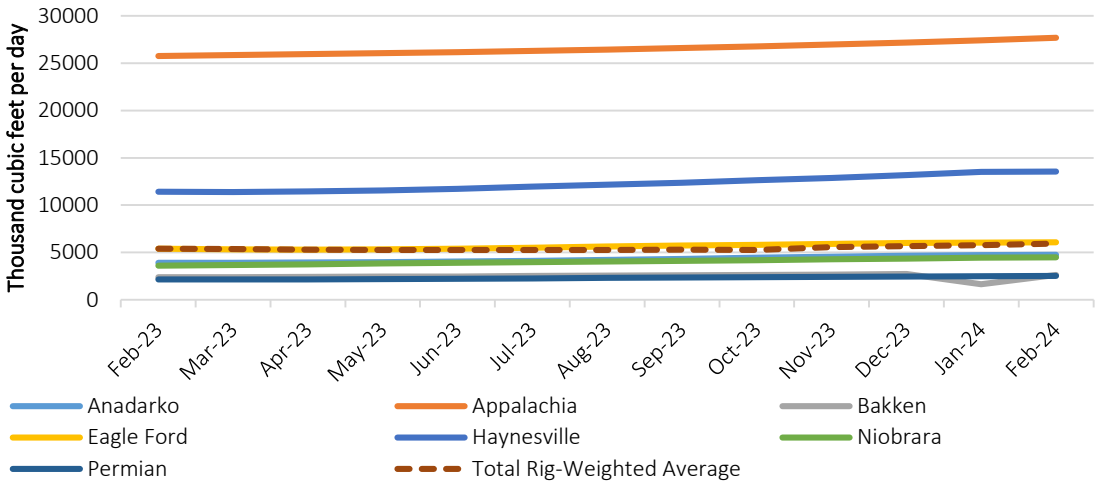
Source: GECF Secretariat based on data from Refinitiv and EIA

Figure 59: Drilled but uncompleted well (DUCs) counts in the US



Source: GECF Secretariat based on data from Refinitiv, US EIA

Figure 60: New-well gas production per rig

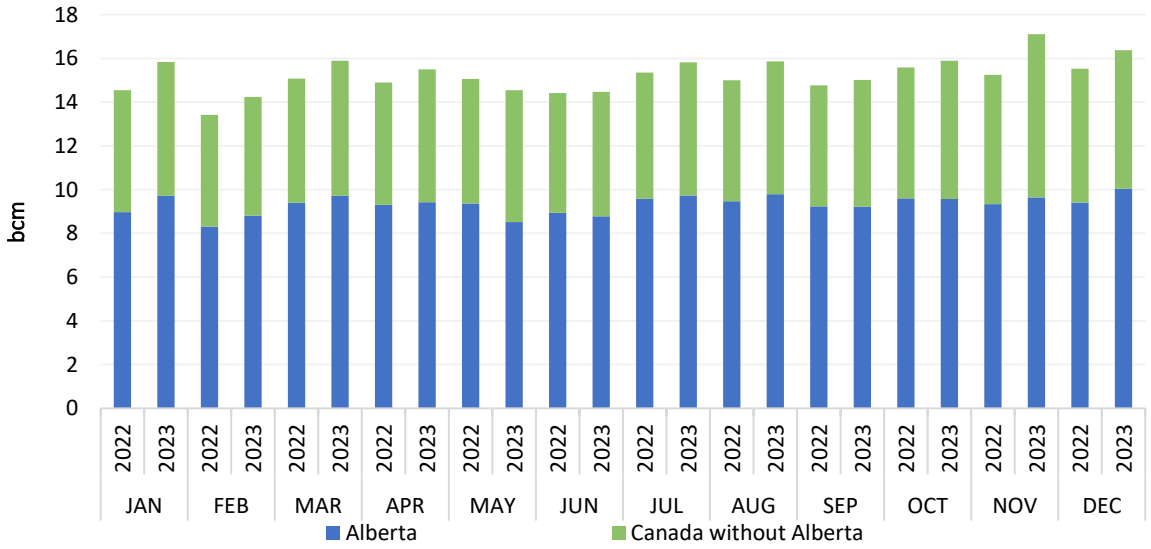


Source: GECF Secretariat based on data from Refinitiv, US EIA

3.4.2. Canada

In December 2023, the Canada Energy Regulator (CER) reported a 6% y-o-y increase in Canada's gas production, achieving 16.3 bcm, with Alberta accounting for 10 bcm of this total, representing 61% (Figure 61). With this level of output, Canada's gas production is estimated to experience an overall 4% y-o-y growth.

Figure 61: Trend in gas production in Canada



Source: GECF Secretariat based on data from the Canada Energy Regulator (CER)

3.5 Latin America and the Caribbean (LAC)

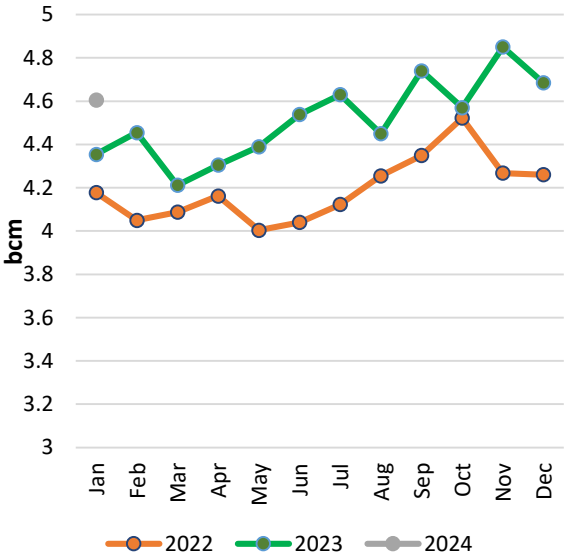
3.5.1 Brazil

Gross gas production reached 4.6 bcm in January 2024, according to data from the Brazilian National Agency of Petroleum (ANP). This represented a 1.7% m-o-m decrease compared to December 2023 level and a 7.6% y-o-y increase compared to January 2023 level (Figure 62).

53% of the produced gas was reinjected into reservoirs. Additionally, gas flaring witnessed a substantial 33.9% m-o-m rise to reach 0.15 bcm, representing 3% of the gross production (Figure 63). This was mainly attributed to the startup of operations for the newly commissioned FPSO Sepetiba, in Campo de Mero. In terms of distribution, the Tupi field in the Santos pre-salt basin emerged as the largest gas-producing field at 1.15 bcm (8% decrease in production m-o-m). Notably, pre-salt fields were responsible for three quarters of the production.

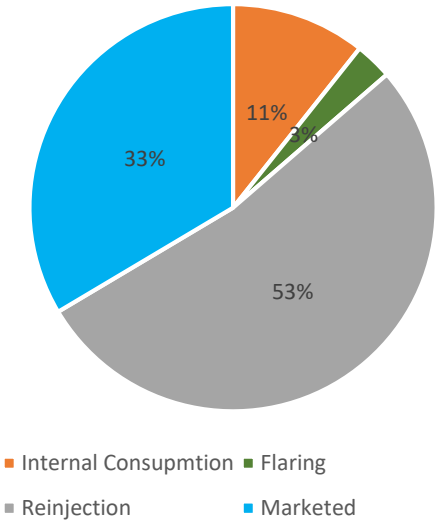
The FPSO facility in Guanabara in the shared Mero field was the highest gas producing facility with approximately 0.36 bcm, the same level as last month. 2023 marked a record high in terms of gross gas production with 54.7 bcm, an 8.6% y-o-y increase from 2022 level.

Figure 62: Trend in gas production in Brazil



Source: GECF Secretariat based on data from the Brazilian National Agency of petroleum (ANP)

Figure 63: Distribution of gross gas production in Brazil

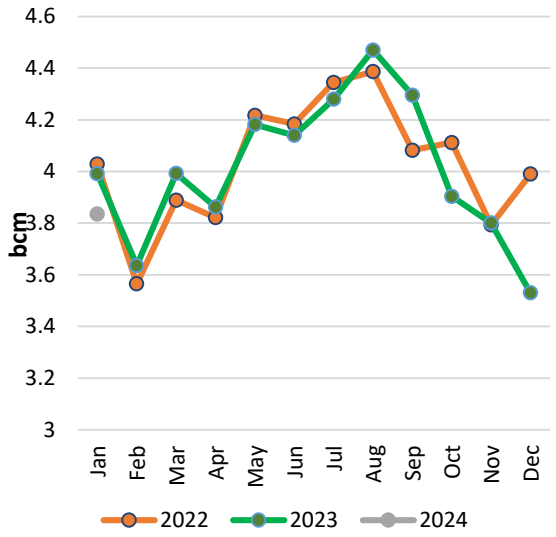


Source: GECF Secretariat based on data from the Brazilian National Agency of petroleum (ANP)

3.5.2 Argentina

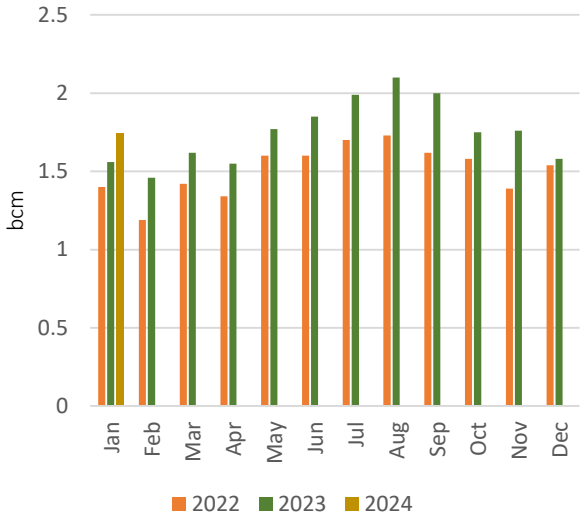
In Argentina, gross gas production reached 3.83 bcm in January 2024, based on data provided by the Argentinian Ministry of Economy. This represented an 8.5% increase compared to the 3.8 bcm output in December 2023, however it marked a 4% y-o-y drop (Figure 64).
Shale gas production amounted to 1.52 bcm, representing 40% of the total production and recording a remarkable 11.4% rise y-o-y (Figure 65), while tight gas reservoir production was 0.55 bcm, with 14% share. The remaining part of the production originated from the conventional gas fields.

Figure 64: Trend in gas production in Argentina



Source: GECF Secretariat based on data from Argentinian Ministry of Economy

Figure 65: Trend in shale gas production in Argentina



Source: GECF Secretariat based on data from Argentinian Ministry of Economy

3.6 Other Developments

BP and ADNOC plan to establish a new gas joint venture in Egypt: According to ADNOC press release, the company along with BP have agreed to establish a new joint venture (JV) company in Egypt that is focused on developing the gas portfolio. The ownership structure of the new company will be split, with 51% BP and 49% ADNOC. As part of the agreement, BP will contribute its interests in three development concessions (including BP's 10% in Shorouk concession which contains Zohr gas field), as well as other exploration agreements in Egypt, to the new JV. ADNOC will make a proportionate cash contribution which can be used for future growth opportunities. The establishment of this JV is expected to be completed in Q2 2024.

Indonesia plans to offer 10 oil and gas exploration blocks in 2024: The Indonesian Ministry of Energy announced that the country plans to offer 10 oil and gas exploration blocks in 2024, aiming to increase its reserves amid a decline in its production output. The new bid for acreage would be offered after the bidding for the Akimeugah-I and Akimeugah-II in the Papua region is concluded in early 2024. Indonesia offered 10 oil and gas exploration blocks in 2023, and the country emerged as the frontrunner in the gas exploration activities with 2 major discoveries.

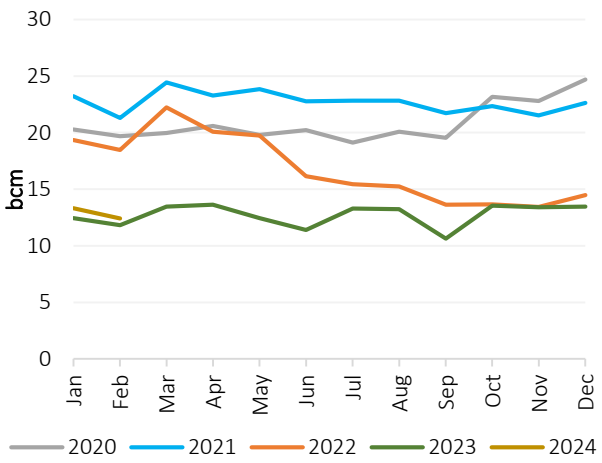
4 Gas Trade

4.1 Pipeline Natural Gas (PNG) Trade

4.1.1 Europe

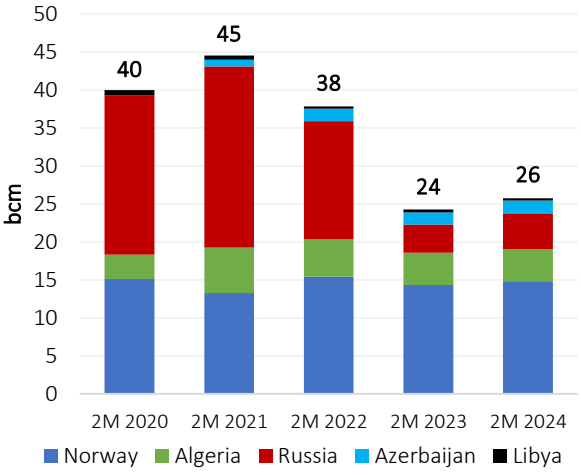
The EU imported 12.4 bcm of PNG in February 2024, which was 7% lower than the volume imported in the previous month, but 5% higher than a year ago (Figure 66). After the first two months of 2024, there has been 25.7 bcm of PNG imported by the bloc, an increase on 6% y-o-y (Figure 67). This increase was driven by a 25% increase in supply from Russia, along with a higher quantity of imports from Norway and Azerbaijan.

Figure 66: Monthly PNG imports to the EU



Source: GECF Secretariat based on data from Refinitiv

Figure 67: Year-to-date EU PNG imports by supplier

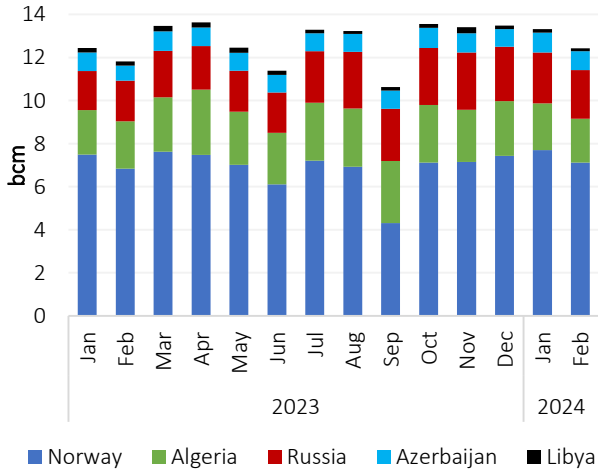


Source: GECF Secretariat based on data from Refinitiv

The quantity of PNG imported in February 2024 was the lowest since September 2023, which was marked by supply interruptions due to high levels of maintenance activities in Norway (Figure 68). After January and February 2024, Norway accounted for 58% of the PNG imported by the EU, followed by Russia at 18% and Algeria at 16%.

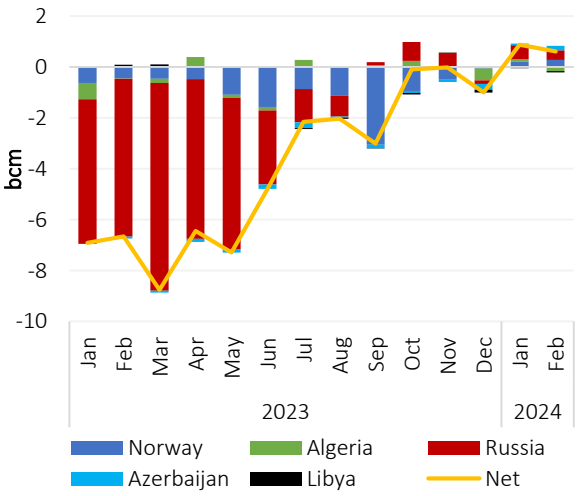
Figure 69 shows the changes in PNG supply to the EU, relative to the same month in the previous year. Since Q4 2023, there has been a more modest y-o-y variation. During that period, monthly imports from Russia have recorded y-o-y increases. Monthly PNG imports from Norway have recorded y-o-y increases in January and February 2024, following decreases over the course of 2023.

Figure 68: Monthly EU PNG imports by supplier



Source: GECF Secretariat based on data from Refinitiv

Figure 69: Y-o-Y PNG supply changes in the EU



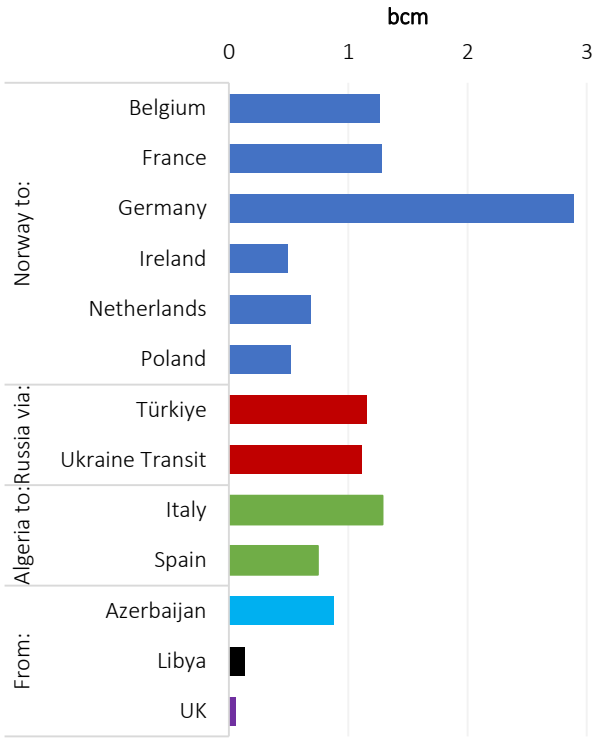
Source: GECF Secretariat based on data from Refinitiv

Figure 70 shows the PNG imports to the EU via the major supply routes in February 2024.

There were decreases in PNG imports via all supply routes from January to February 2024. In particular, there were 0.14 bcm or 5% less supply delivered to Germany from Norway, and 0.11 bcm or 18% less supply delivered to Poland during the month. For Russia, supply via the Turkstream pipeline was unchanged in February and accounted for 51% of its exports. Algeria exported 63% of its volumes to Italy, although that market received 5% less PNG m-o-m. There were 0.06 bcm of net PNG flows from the UK to the EU during the month.

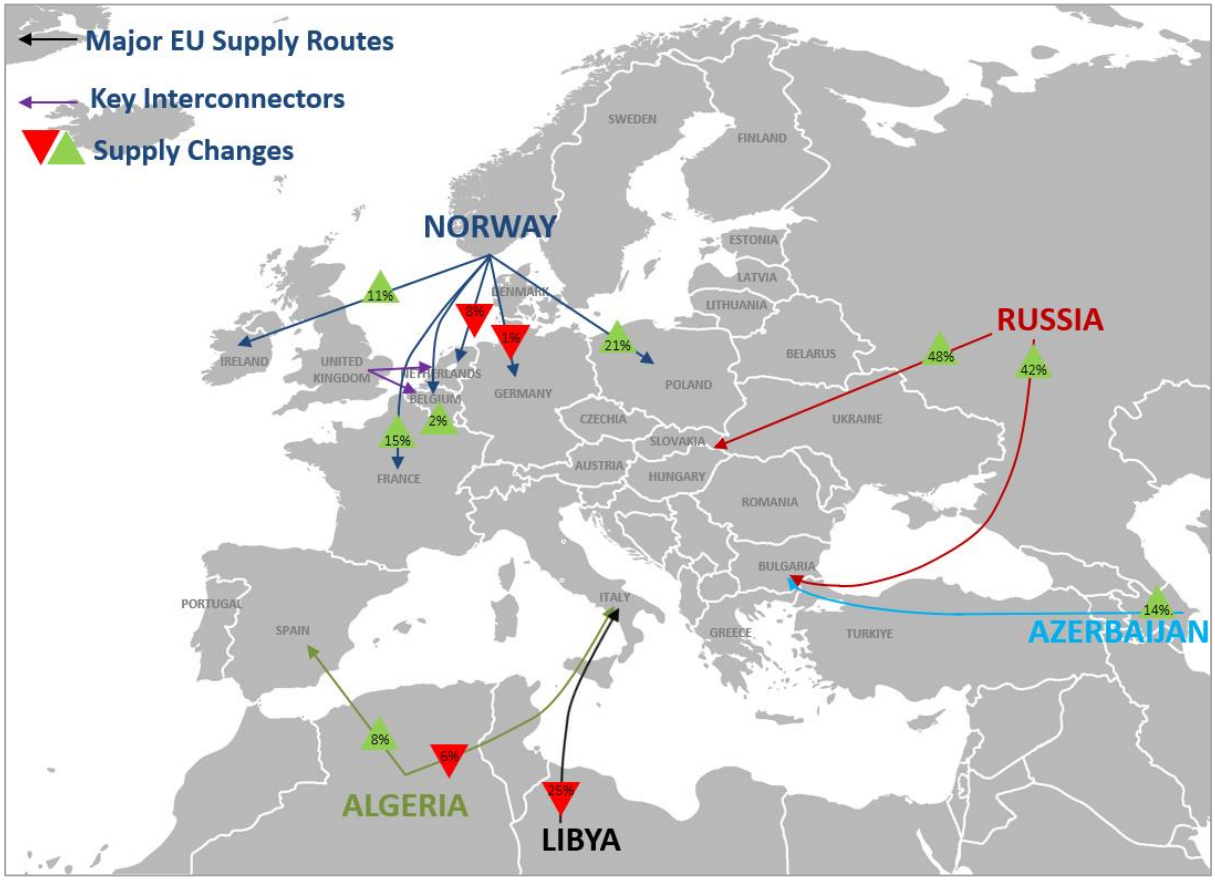
Figure 71 displays the PNG imports to the EU via the major supply routes after the two months of 2024, versus the same period in 2023. Russia increased via both supply routes. Additionally, Azerbaijan increased supply to the EU by 14% over the period.

Figure 70: EU PNG imports by supply route, in February 2024



Source: GECF Secretariat based on data from Refinitiv

Figure 71: PNG imports to the EU by supply route (2M 2024 v 2M 2023)

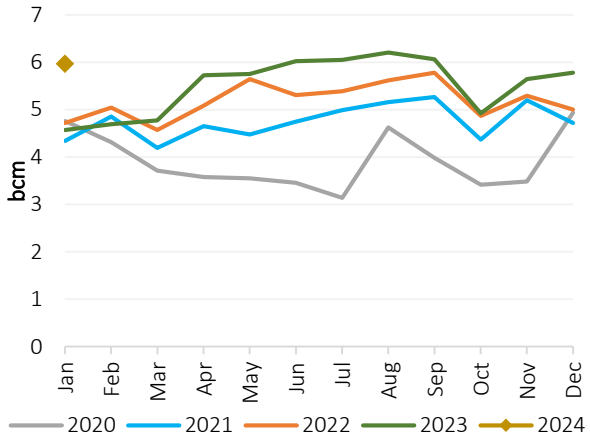


Source: GECF Secretariat based on data from Refinitiv

4.1.2 Asia

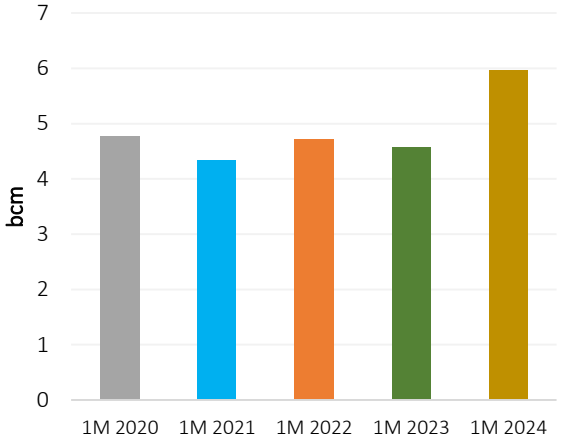
China imported an estimated quantity of 6.0 bcm of PNG in January 2024, which represented a 3% increase from the previous month, and a significant 31% increase over the level recorded in January 2023 (Figure 72). The share of PNG imports in the country's overall gas imports for the month reached 36%. Moreover, this quantity of PNG imports was the largest recorded for the month of January, surpassing previous highs observed in 2020 and 2022 (Figure 73). China's PNG imports for 2024 are expected to increase y-o-y, driven by a rise in deliveries from Russia as the Power of Siberia 1 pipeline ramps up its operational capacity.

Figure 72: Monthly PNG imports in China



Source: GECF Secretariat based on data from Refinitiv and General Administration of Customs China

Figure 73: Year-to-date PNG imports in China

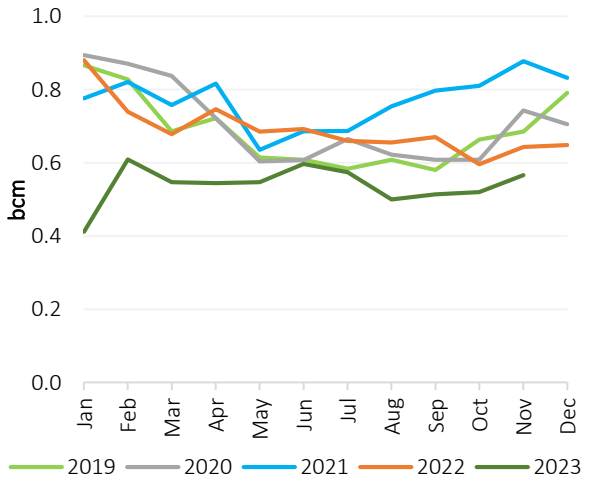


Source: GECF Secretariat based on data from Refinitiv and General Administration of Customs China

In November 2023, Singapore imported 0.57 bcm of PNG from Indonesia and Malaysia, which was an increase of 9% from the level recorded in the previous month but was 12% lower y-o-y (Figure 74). During the period January to November 2023, total PNG imports totalled 5.9 bcm, which was 22% lower than during the same months of 2022.

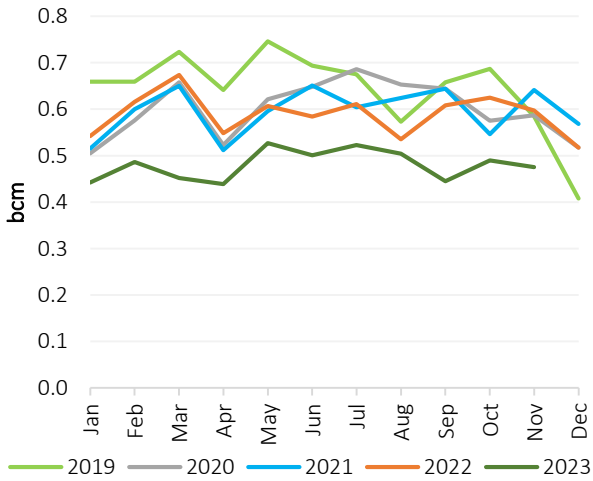
Thailand imported 0.48 bcm of PNG supply from Myanmar in November 2023. This volume was 3% less than the amount imported one month earlier, and 20% less than the amount imported in November 2022 (Figure 75). From January to November 2023, total PNG imports reached 5.3 bcm, a decrease of 19% y-o-y.

Figure 74: Monthly PNG imports in Singapore



Source: GECF Secretariat based on data from JODI Gas

Figure 75: Monthly PNG imports in Thailand

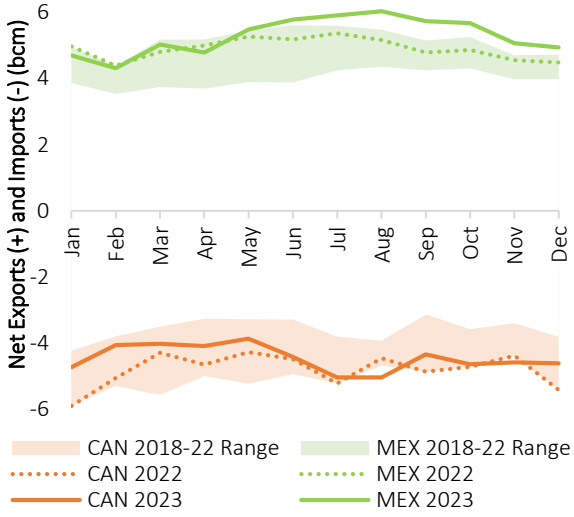


Source: GECF Secretariat based on data from JODI Gas

4.1.3 North America

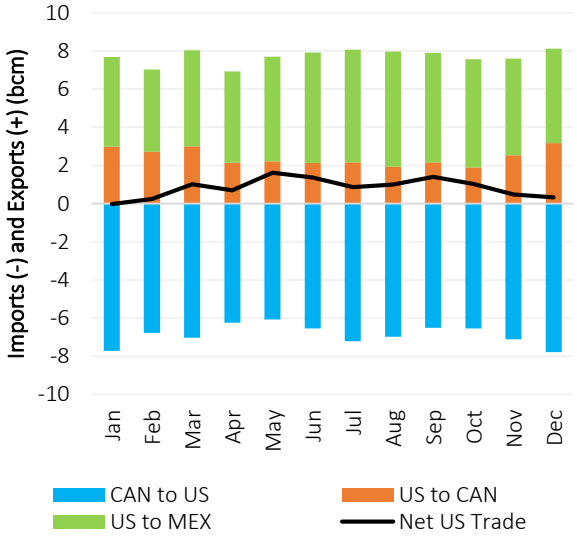
The US exported 4.9 bcm of PNG to Mexico in December 2023, a 2% decrease from the previous month, but was 10% higher than the quantity delivered in December 2022 (Figure 76). At the same time, there were 4.6 bcm of net PNG imports from Canada to the US during the month, which was an increase of 1% m-o-m, but 15% lower than one year ago. In December 2023, there was a net flow of 0.3 bcm of PNG from the US to the other countries of North America (Figure 77). During the entire year, exports from the US to Mexico reached 63.4 bcm, which was an increase of 8% y-o-y. Net PNG imports from Canada to the US reached 53.4 bcm, which was a decrease of 7% y-o-y. The average monthly flows in the region in 2023 were 6.9 bcm from Canada to the US, 2.4 bcm from the US to Canada and 5.3 bcm from the US to Mexico.

Figure 76: Historical net PNG trade in the USA



Source: GECF Secretariat based on data from US EIA

Figure 77: Monthly US PNG trade



Source: GECF Secretariat based on data from US EIA

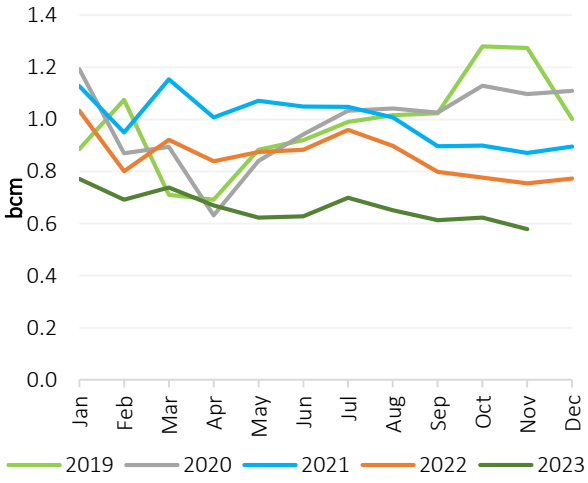
4.1.4 Latin America and the Caribbean

In November 2023, Bolivia exported 0.58 bcm of PNG to Brazil and Argentina (Figure 78). This quantity represented a 7% decrease from the previous month, as well as a 23% decrease from the level recorded one year ago.

Over the period from January to November 2023, 7.3 bcm of PNG was exported by Bolivia, which was a decrease of 24% compared with the same period in 2022.

In November 2023, Argentina exported 0.18 bcm of PNG to Chile, a decrease of 15% m-o-m, and 30% y-o-y. Total exports from January to November 2023 increased by 15% y-o-y to reach 2.0 bcm.

Figure 78: Monthly PNG exports from Bolivia



Source: GECF Secretariat based on data from JODI Gas

4.1.5 Other Developments

Germany to import pipeline natural gas from Algeria: Algeria currently exports pipeline gas to customers in Italy and Spain. In February 2024, it was announced that its state energy company, Sonatrach, had signed an agreement for the supply of pipeline natural gas with Germany's gas trading company, VNG Handel & Vertrieb. This marks the first occasion where Algeria will export pipeline gas to Germany. Germany is seeking new sources of natural gas to offset its shortfall in imports in recent times. Both countries signed a medium-term contract for an undisclosed quantity of supply. The volumes will enter southern Europe via Italy, then transit towards Germany.

Progress on the Iran-Pakistan gas pipeline: The long-standing project for the construction of a gas pipeline from Iran to Pakistan received a boost from an announcement of intent from the Government of Pakistan recently. The pipeline will span a distance of around 2,800 km, with a capacity of 7.8 bcma. Iran has invested some two billion dollars into the project and has completed construction of its portion of the pipeline, from the Pars energy economic zone to the Pakistan border. Now, Pakistani officials have committed to launch construction on its side, starting with an 80 km stretch from the Iranian border to the Pakistani port city of Gwadar. This first phase is estimated to cost $158 million.

4.2 LNG Trade

4.2.1 LNG Imports

In February 2024, global LNG imports were relatively flat compared to the previous year, standing at 33.74 Mt (Figure 79). However, Asia Pacific, LAC and MENA regions recorded increases in LNG imports, offsetting weaker imports in Europe and North America (Figure 80). Between January and February 2024, global LNG imports grew by 3.7% (2.61 Mt) y-o-y to reach 72.79 Mt, driven mainly by Asia Pacific.

Figure 79: Trend in global monthly LNG imports

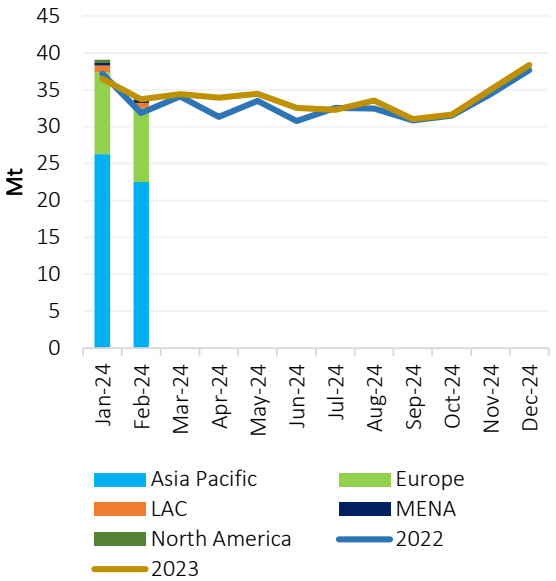
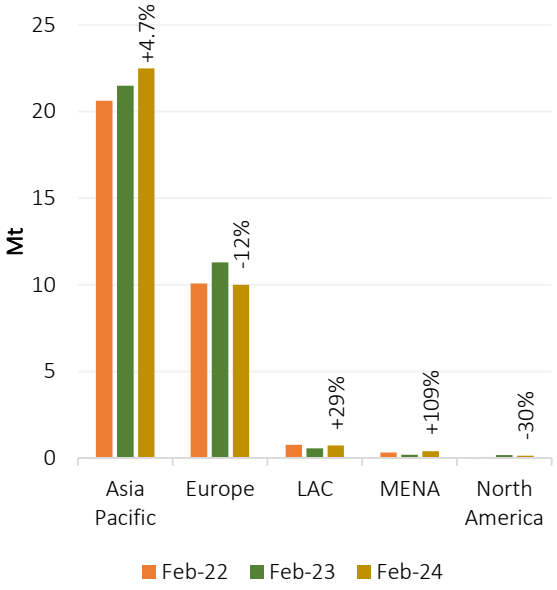


Figure 80: Trend in regional LNG imports



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.1.1 Europe

In February 2024, LNG imports in Europe declined for the eight consecutive month, falling by 12% (1.30 Mt) y-o-y to 10.00 Mt (Figure 81). The monthly imports were also lower compared to February 2022 levels. Lower gas consumption and significant price premium of spot LNG in Asia Pacific over Europe mainly drove the weaker LNG imports in Europe. France, Türkiye and the UK drove the decline in Europe's LNG imports, which were partially offset by higher imports in Finland, Germany, Italy and the Netherlands (Figure 82). From January to February 2024, Europe's LNG imports fell by 10% (2.40 Mt) y-o-y to 21.08 Mt.

In France, a decrease in gas consumption coupled with higher pipeline gas imports from Norway contributed to the decline in LNG imports. The weaker LNG imports in Türkiye was attributed to a decline in gas consumption and higher gas production. Furthermore, the drop in UK's LNG imports was due to lower gas consumption and a decline in pipeline gas exports to mainland Europe.

Conversely, the increased utilisation of the Inkoo LNG facility, specifically by Estonia, led to the rise in Finland's LNG imports. Meanwhile, the stronger LNG imports in Germany and the Netherlands were also driven by higher LNG imports through the recently commissioned LNG import facilities in both countries. Finally, weaker pipeline gas imports from Algeria, Libya, Norway and Russia were boosted by Italy's LNG imports.

Figure 81: Trend in Europe's monthly LNG imports

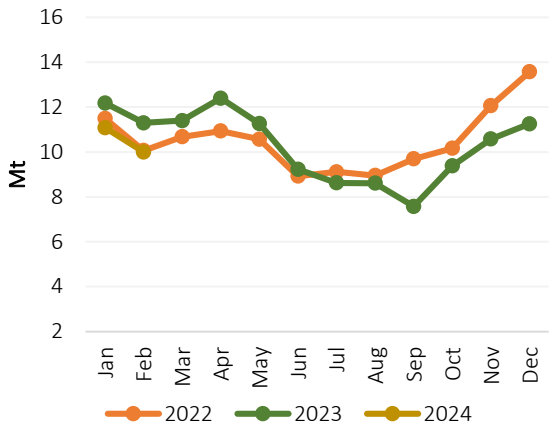
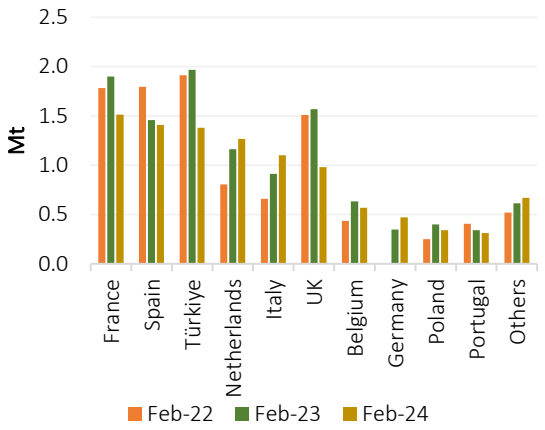


Figure 82: Top LNG importers in Europe



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.1.2 Asia Pacific

In February 2024, Asia Pacific's LNG imports expanded by 4.7% (1.00 Mt) y-o-y to 22.50 Mt, which was still below the LNG imports in February 2021 (Figure 83). Higher gas consumption in some countries and declining spot LNG prices, which boosted spot LNG demand in price sensitive markets, contributed to the rise in Asia Pacific's LNG imports. The stronger imports came mainly from Bangladesh, China, India, Pakistan, the Philippines, Singapore and Thailand (Figure 84). Conversely, Japan and South Korea recorded significant declines in LNG imports. Between January and February 2024, LNG imports in Asia Pacific grew by 8.4% (3.79 Mt) y-o-y to 48.79 Mt.

In China and India, stronger gas consumption boosted their LNG imports in both countries. In addition, an increase in LNG imports from Australia supported the growth in Chinese LNG imports. Meanwhile, cheaper spot LNG contributed to opportunistic buying in price sensitive markets, including Bangladesh, India, Pakistan and Thailand. The rising contractual LNG imports from Qatar led to the jump in Singapore's LNG imports. Furthermore, declining gas production in the Philippines and Thailand drove the increase in their LNG imports. In contrast, the declines in LNG imports in Japan and South Korea were attributed to lower gas consumption in both countries.

Figure 83: Trend in Asia's monthly LNG imports

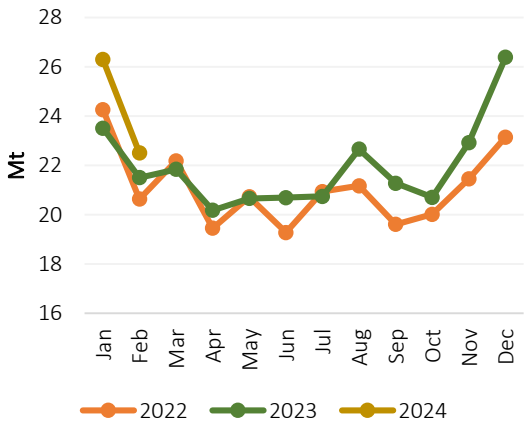
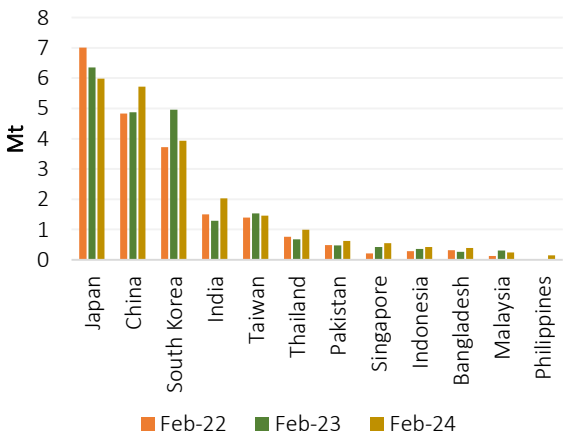


Figure 84: Top LNG importers in Asia Pacific



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.1.3 Latin America & the Caribbean (LAC)

In February 2024, LNG imports in the LAC region rose by 30% (0.16 Mt) year-on-year to 0.72 Mt, representing the second consecutive monthly y-o-y increase (Figure 85). Brazil, Colombia, the Dominican Republic and Jamaica drove the increase in the region's LNG imports, offsetting weaker imports in Panama and Puerto Rico (Figure 86). From January to February 2024, LAC's LNG imports surged by 55% (0.58 Mt) y-o-y to 1.65 Mt.

The rise in Brazil's LNG imports was due to the start-up of the Barcarena FSRU in the country. In Colombia, stronger gas consumption in the power sector, brought about by lower hydro output caused by the El Niño phenomenon, led to the increase in LNG imports. Likewise, higher gas burn in the Dominican Republic drove its LNG imports higher. Meanwhile, an increase in LNG imports from Nigeria boosted Jamaica's LNG imports.

Figure 85: Trend in LAC's monthly LNG imports

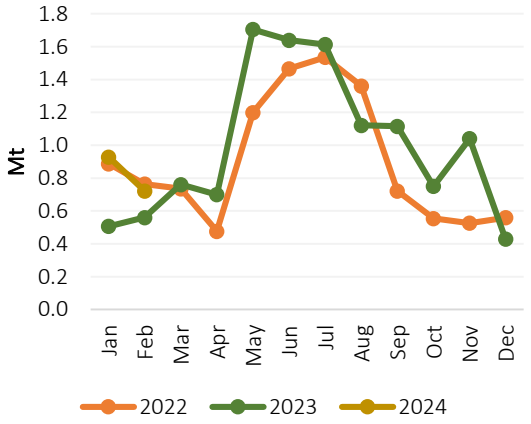
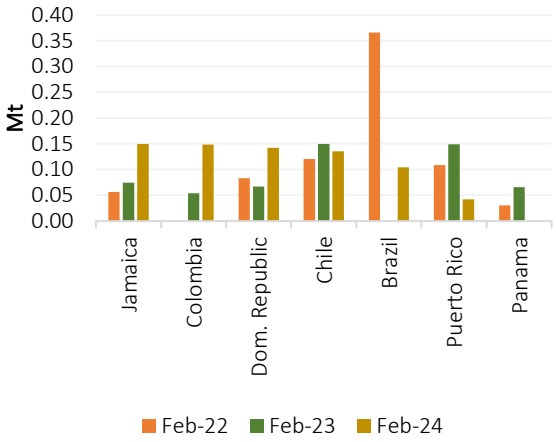


Figure 86: Top LNG importers in LAC



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.1.4 MENA

In February 2024, the MENA region's LNG imports jumped by 109% (0.21 Mt) y-o-y to 0.40 Mt (Figure 87). Similar to January, Kuwait was the only LNG importer and drove the increase in the region's imports, due to its higher gas consumption (Figure 88). Between January and February 2024, LNG imports in the MENA region surged by 96% (0.36 Mt) to 0.73 Mt.

Figure 87: Trend in MENA's monthly LNG imports

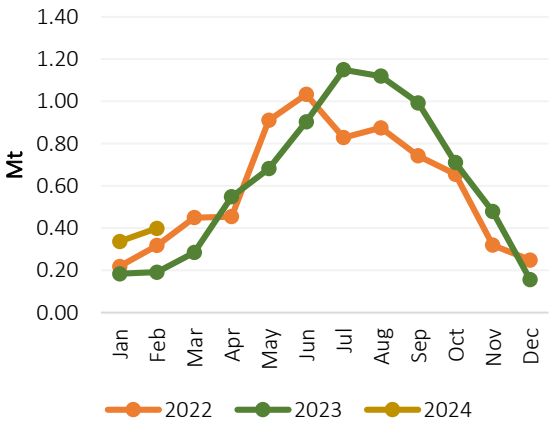
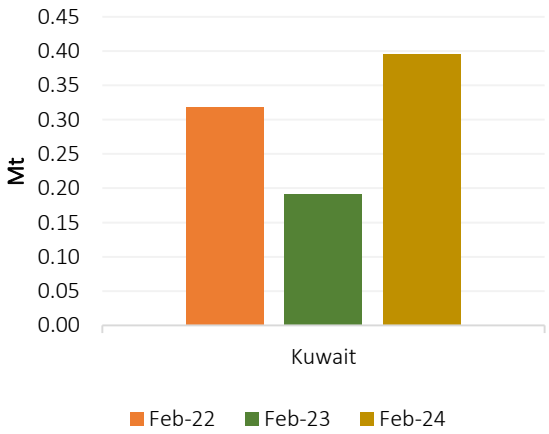


Figure 88: Top LNG importers in MENA



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.2 LNG Exports

In February 2024, global LNG exports were up marginally by 1.0% (0.35 Mt) y-o-y to stand at 33.95 Mt (Figure 89). Both GECF and non-GECF countries supported the increase in LNG exports and offset weaker LNG reloads. Non-GECF countries maintained its position as the largest LNG supplier globally, with a market share of 52.2%, up from 50.7% a year earlier. The share of LNG exports from GECF Member Countries also increased from 46.7% to 47.1%, while the share of reloads declined sharply from 2.5% to 0.7%. Between January and February 2024, global LNG exports grew by 4.0% (2.74 Mt) y-o-y to 71.45 Mt, driven by GECF and non-GECF countries. The US was the largest LNG exporter in February, followed closely by Australia and Qatar (Figure 90).

Figure 89: Trend in global monthly LNG exports

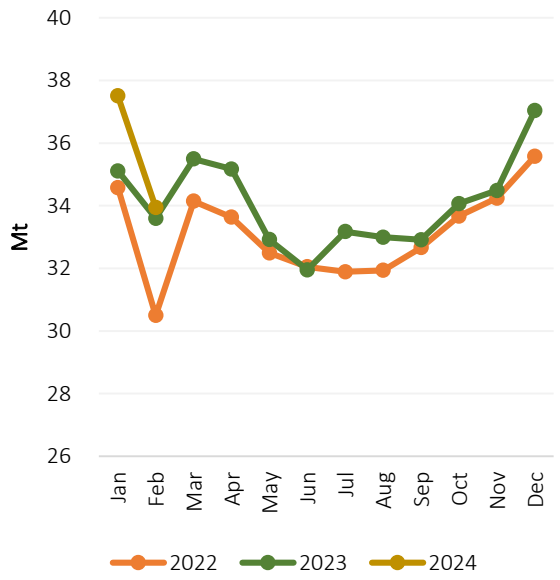
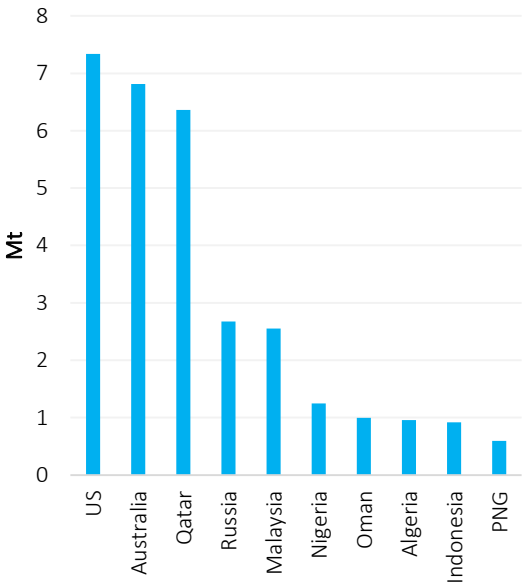


Figure 90: Top 10 LNG exporters in Feb 2024



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.2.1 GECF

In February 2024, LNG exports from GECF member countries and observers increased by 1.9% (0.30 Mt) y-o-y to15.98 Mt (Figure 91). The increase in LNG exports was driven by Algeria, Malaysia, Mozambique, Nigeria, Qatar and the United Arab Emirates, which offset declines in LNG exports from Angola, Egypt and Trinidad and Tobago (Figure 92). From January to February 2024, GECF's LNG exports increased by 4.0% (1.30 Mt) y-o-y to 34.05 Mt.

In Algeria, the higher LNG exports was due to lower maintenance activity compared to a year earlier. In February 2023, the Skikda LNG facility underwent planned maintenance. Similarly, lower planned maintenance at the PFLNG 2 facility in Malaysia, the Bonny LNG facility in Nigeria and Qatargas 1 in Qatar led to the increases in LNG exports from all three countries. In Mozambique, the continued ramp-up in production at the Coral South FLNG facility boosted its LNG exports. Meanwhile, the higher LNG exports from the United Arab Emirates was attributed to lower unplanned maintenance. In February 2023, the Das Island LNG facility was impacted by an unplanned outage.

Conversely, the drop in LNG exports from Angola, Egypt and Trinidad and Tobago was driven by lower feedgas availability in these countries.

Figure 91: Trend in GECF monthly LNG exports

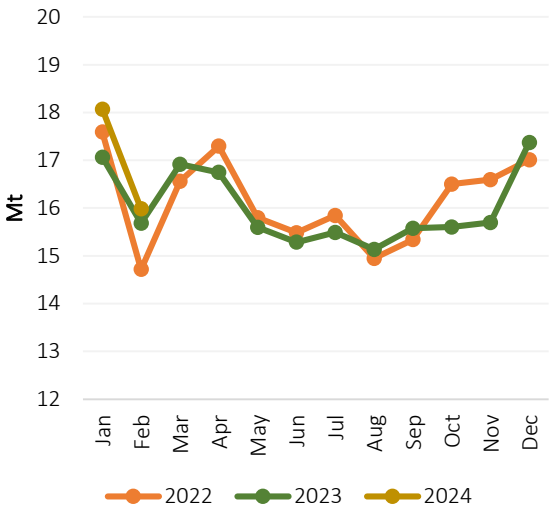
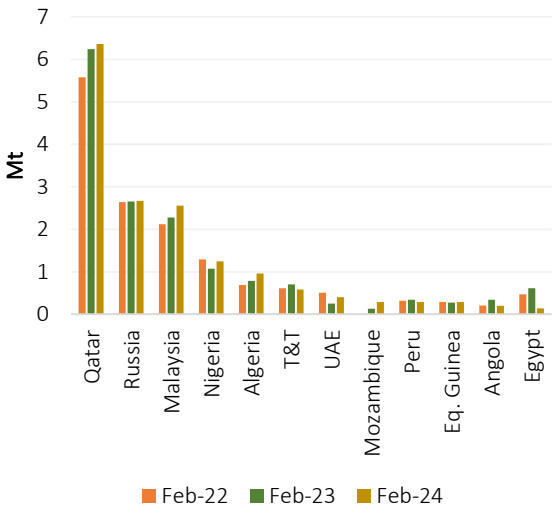


Figure 92: GECF's LNG exports by country



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.2.2 Non-GECF

In February 2024, LNG exports from non-GECF countries rose by 3.8% (0.65 Mt) y-o-y to stand at 17.73 Mt (Figure 93). The uptick in LNG exports came mainly from Australia, Norway and the US, which offset weaker LNG exports from Indonesia (Figure 94). Between January and February 2024, non-GECF's LNG exports expanded by 5.8% (2.03 Mt) y-o-y to 36.79 Mt.

The rise in Australia's LNG exports was attributed to lower planned maintenance activity at the Gorgon LNG facility and stronger production from the Prelude LNG facility. In Norway, higher LNG exports from the Hammerfest LNG facility supported the increase in LNG exports. Meanwhile, the continued increase in LNG exports from the Freeport LNG facility, following its restart in February 2023, and higher production from the Sabine Pass LNG facility boosted the US LNG exports. Conversely, an unplanned outage at the Tangguh LNG facility led to the decline in Indonesia's LNG exports.

Figure 93: Trend in non-GECF monthly LNG exports

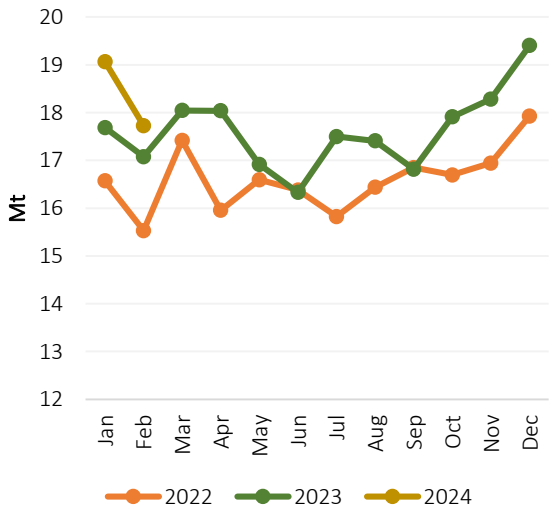
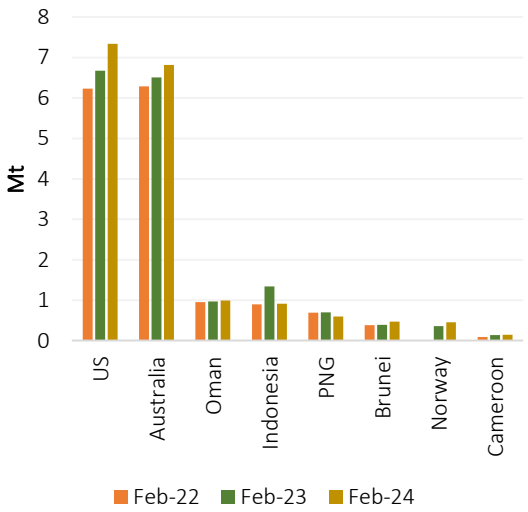


Figure 94: Non-GECF's LNG exports by country



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.3 Global LNG Reloads

In February 2024, global LNG reloads fell sharply by 71% (0.59 Mt) y-o-y to 0.24 Mt, which is the lowest monthly level since July 2023 (Figure 95). The lower LNG reloads was mainly driven by a fall in reloading activity in China and Malaysia, while LNG reloads declined at a lesser extent in Belgium, France, Jamaica and South Korea (Figure 96). From January to February 2024, LNG reloads dropped by 49% (0.59 Mt) y-o-y to 0.61 Mt.

The sharp decline in LNG reloads from China and Malaysia, was mainly due to weaker spot LNG demand in Japan and South Korea, which have been the main market for LNG re-exports from China. Meanwhile, lower LNG re-export to Puerto Rico curbed LNG reloads from Jamaica.

Figure 95: Trend in global monthly LNG reloads

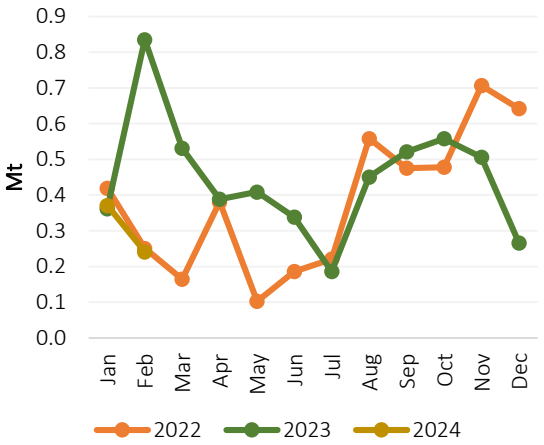
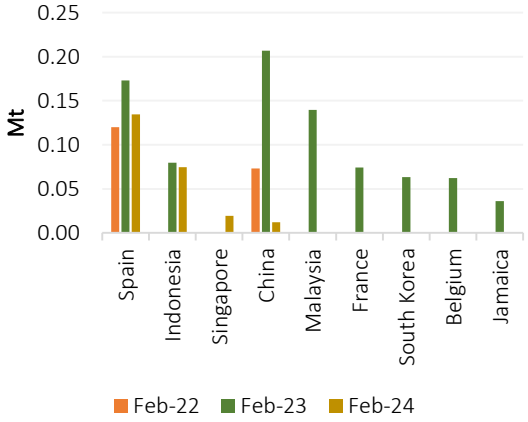


Figure 96: Global LNG reloads by country



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.4 Arbitrage Opportunity

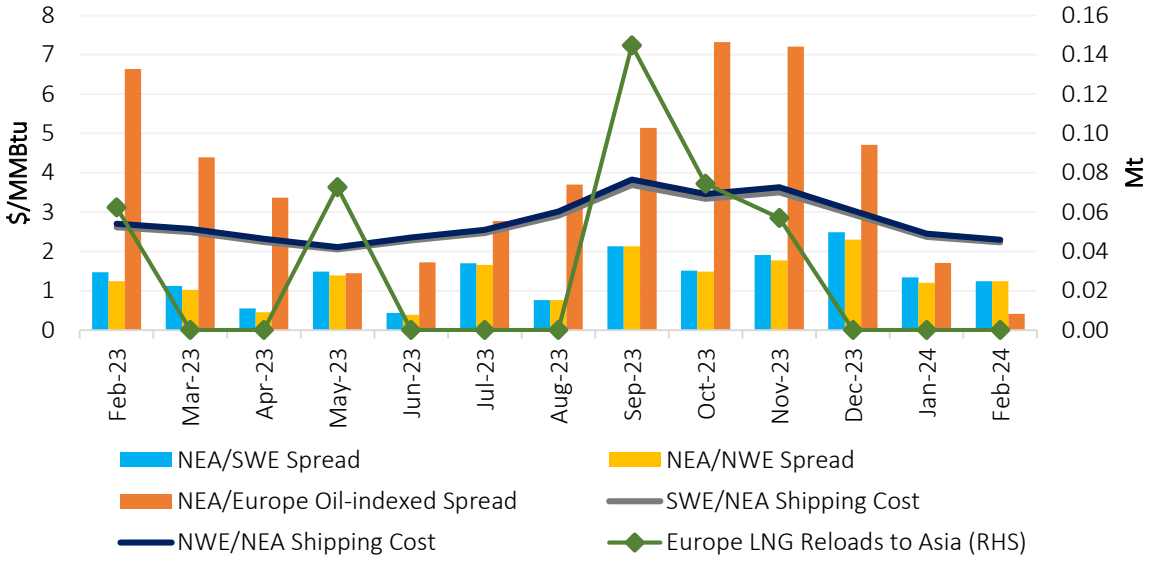
In February 2024, the arbitrage opportunity for LNG reloads from Europe to Asia Pacific remained closed. This was due to the spot LNG shipping costs between both Asia Pacific and Europe maintaining a significant premium over the spot LNG price spreads between both markets (Figure 97). Likewise, the spot LNG shipping cost increased its premium over the price spread between spot LNG price in Asia Pacific and oil-indexed prices in Europe.

The price spreads between NEA/SWE fell by 7.5% ($0.10/MMBtu) while the NEA/NWE price spread grew by 3.3% ($0.04/MMBtu) m-o-m to each reach $1.24/MMBtu. The increase in the NEA/SWE price spread was driven by the sharper decline in spot LNG prices in Asia compared to SWE while the more significant drop in the spot LNG price in NWE contributed to the increased NEA/NWE price spread. Meanwhile, the price spread between spot LNG prices in Asia Pacific and oil-indexed prices in Europe slumped by 76% ($1.30/MMBtu) m-o-m to $0.41/MMBtu.

The shipping costs for the NEA/SWE and NEA/NWE spot routes continued to decrease, falling by 6% ($0.15/MMBtu) m-o-m each to $2.23/MMBtu and $2.30/MMBtu, respectively. However, it's important to note that shipping costs can vary based on the specific vessels used. Medium to long-term chartered vessels may have lower costs compared to spot shipping rates. There were no LNG reloads from Europe to Asia Pacific in February 2024.

On a y-o-y comparison, the NEA/SWE price spread declined by 16% ($0.23/MMBtu) while the NEA/NWE price spread was unchanged. Furthermore, the price spread between NEA spot LNG and European oil-indexed gas prices, as well as the NEA/SWE and NEA/NWE spot shipping costs fell by 94% ($6.23/MMBtu), 15% ($0.38/MMBtu) and 15% ($0.40/MMBtu) y-o-y, respectively.

Figure 97: Price spreads & shipping costs between Asia & Europe spot LNG markets

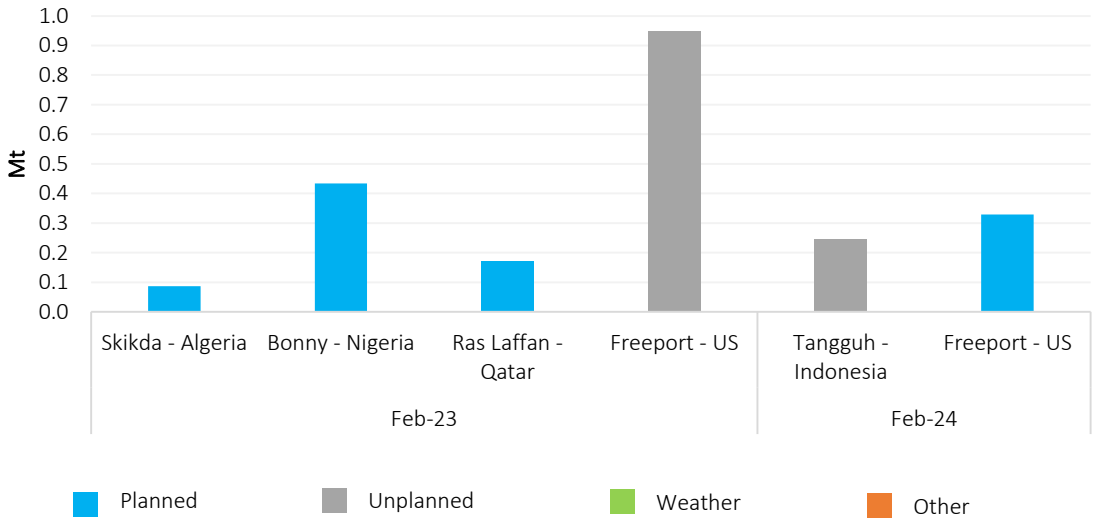


Source: GECF Secretariat based on data from GECF Shipping Model, Argus and ICIS LNG Edge

4.2.5 Maintenance Activity at LNG Liquefaction Facilities

In February 2024, the combined impact of scheduled maintenance, unexpected shutdowns, and other factors at liquefaction plants globally stood at 0.57 Mt, representing one-third of the impacted liquefaction capacity in February 2023 (Figure 98). The main impacts were unplanned outages at Tangguh LNG facility in Indonesia and Freeport LNG facility in the US.

Figure 98: Maintenance activity at LNG liquefaction facilities during January (2023 and 2024)



Source: GECF Secretariat based on information from Argus, ICIS LNG Edge and Refinitiv

4.2.6 Other Developments

Greece's Alexandroupolis FSRU Receives First LNG Cargo – The Alexandroupolis FSRU in Greece welcomed its inaugural LNG cargo on February 18, 2024. Originally slated for commissioning in January 2024, the start-up was delayed due to inclement weather. Developed by Gastrade, the Alexandroupolis FSRU boasts a regasification capacity of 4 Mtpa, marking Greece's first FSRU. Arriving in December 2023, the FSRU was swiftly installed within a week. The first LNG cargo delivered to the FSRU was supplied by TotalEnergies from the Cameron LNG facility in the US.

Energos Power FSRU Arrives in Germany – The Energos Power FSRU reached the port of Mukran in Germany on February 24, 2024, where it will serve as one of two FSRUs for Deutsche Ostsee LNG phase 2. Developed by Deutsche Regas, this FSRU boasts a regasification capacity of 6.5 Mtpa. Laden with LNG from the Hammerfest LNG facility in Norway via a ship-to-ship transfer in Montoir, France, the vessel completed its journey to Mukran. The Hoegh Neptune FSRU, currently operating as part of Deutsche Ostsee LNG phase 1 in Lubmin, Germany, is slated to be relocated to Mukran by June 2024.

Brazil's Barcarena FSRU Commences Operations – At the end of February 2024, the Barcarena FSRU in Brazil commenced operations in the Para state. Developed by New Fortress Energy, this FSRU, equipped with a regasification capacity of 5.7 Mtpa, will utilize the Energos Celsius vessel. Before reaching Brazil, the FSRU underwent LNG loading via ship-to-ship transfer from the Portland Bight facility in Jamaica. The LNG cargo was supplied by Cheniere to New Fortress Energy.

Brazil's Santa Catarina FSRU Commences Operations – Also in late February 2024, the Santa Catarina FSRU in Brazil began operations in the Santa Catarina state. Developed by New Fortress Energy, this FSRU, with a regasification capacity of 5.7 Mtpa, will employ the Energos Winter vessel, previously utilized at the Pecem terminal in Brazil.

In terms of LNG agreements, five contracts were signed in February 2024 (Table 1).

Table 1: New LNG sale agreements signed in February 2024

Contract Type	Exporting Country	Project	Seller	Importing Country	Buyer	Volume (Mtpa)	Duration (Years)
SPA	Qatar	Ras Laffan	QatarEnergy	India	Petronet	7.5	20
SPA	Portfolio		Repsol	UK	Centrica	1	3
SPA	US	Delfin LNG	Delfin Midstream	Portfolio	Chesapeake Energy Co.	0.5	20
SPA	Norway	Hammerfest	Equinor	India	Deepak Fertilisers	0.65	15
SPA	Portfolio		Woodside Energy	South Korea	KOGAS	0.5	10.5

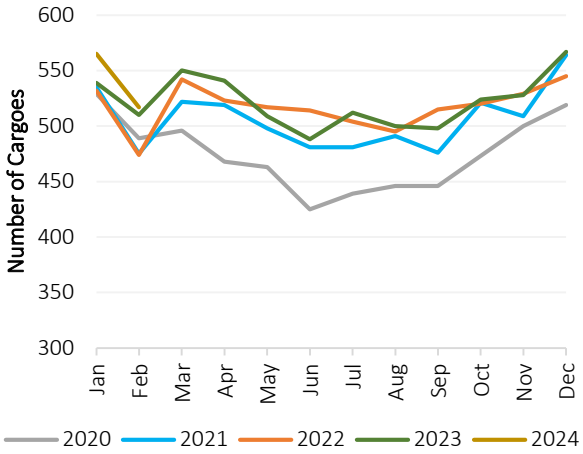
Source: GECF Secretariat based on Project Updates and News

4.2.7 LNG Shipping

There were 517 LNG cargoes exported in February 2024, which was 8% less than the number of shipments in the previous month, but 1% more than the level of one year ago (Figure 99). After two months of 2024, there have been 1,082 cargoes exported, which marked an increase of 3% or 33 deliveries compared with the same period in 2023 (Figure 100).

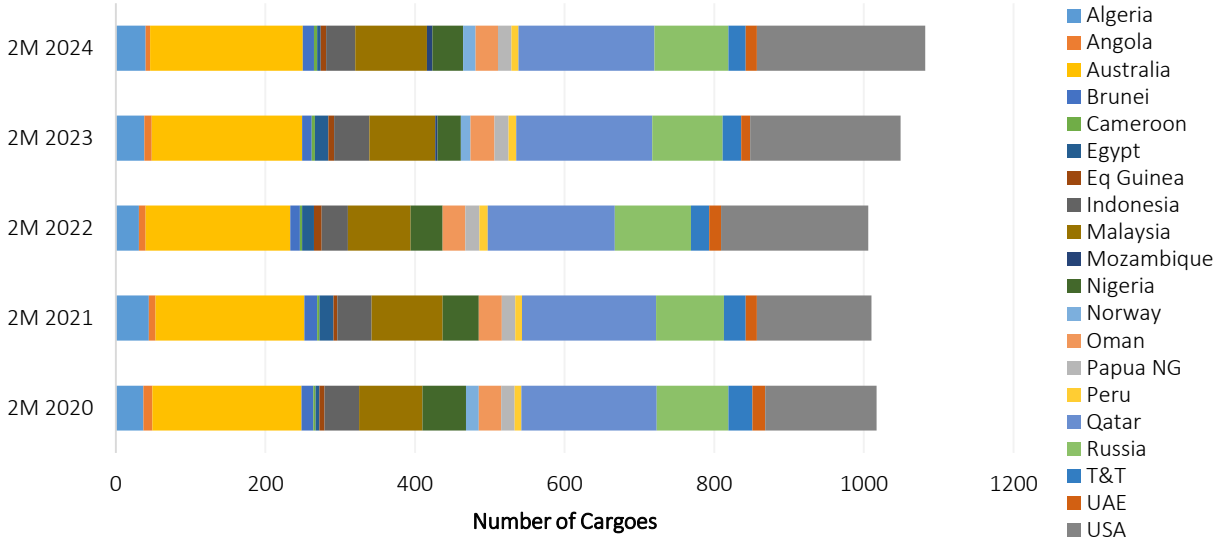
In 2024 thus far, the US has delivered 24 more cargoes than in the same period of 2023 (Figure 101). The next-ranked countries are Nigeria and Malaysia, with 10 and 8 more shipments, respectively.

Figure 99: Number of LNG export cargoes



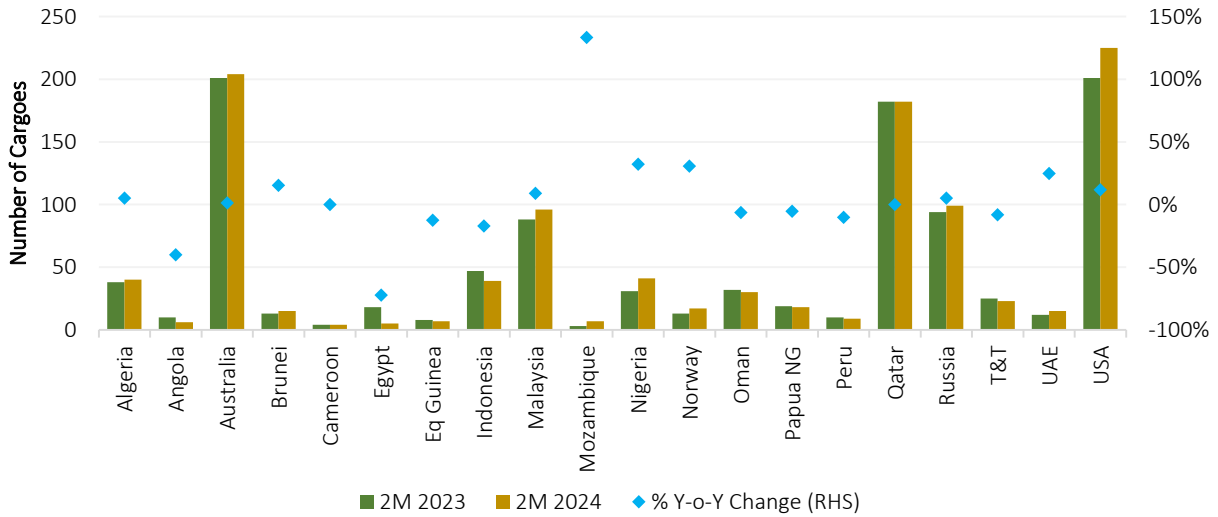
Source: GECF Secretariat based on data from ICIS LNG Edge

Figure 100: Number of LNG cargoes by exporting country



Source: GECF Secretariat based on data from ICIS LNG Edge

Figure 101: Changes in LNG cargo exports



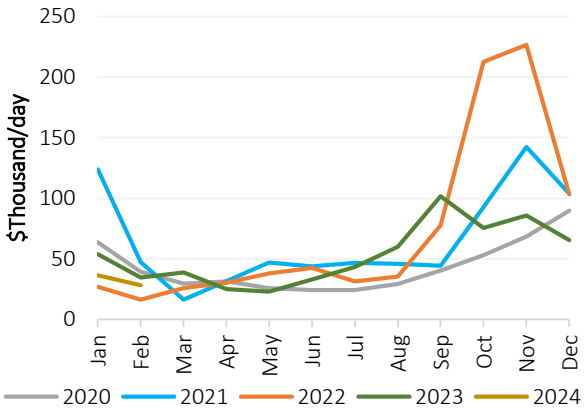
Source: GECF Secretariat based on data from ICIS LNG Edge

The monthly average spot charter rate for steam turbine LNG carriers reached $28,200 per day in February 2024, which represented a decrease of 22% (Figure 102). In addition, the monthly average charter rate was 18% lower y-o-y, as well as $6,300 less than the five-year average price for the month of February. Charter rates have been on a general downward trend since September 2023. Moreover, this softening of the average charter rates was also observed for the other segments of the global LNG carrier fleet. The average spot charter rate for TDFE vessels decreased by 29% m-o-m to reach $42,500 per day, while the average spot charter rate for two-stroke vessels fell by 23% m-o-m to reach $61,700 per day.

Notably, initial data suggests that there have been zero transits of LNG carriers through either the Panama Canal or the Suez Canal during February 2024. The Panama Canal has been plagued by low water levels due to drought conditions, leading to a reduction in the shipping traffic. In the meantime, conflict in the Red Sea has dissuaded shippers from utilising the Suez Canal in recent weeks. As a result, maritime activity between the basins has had to traverse around the Cape of Good Hope, adding to the number of sailing days and decreasing vessel availability. Nevertheless, the effect of this has been minimal, in line with the weakening inter-basin arbitrage.

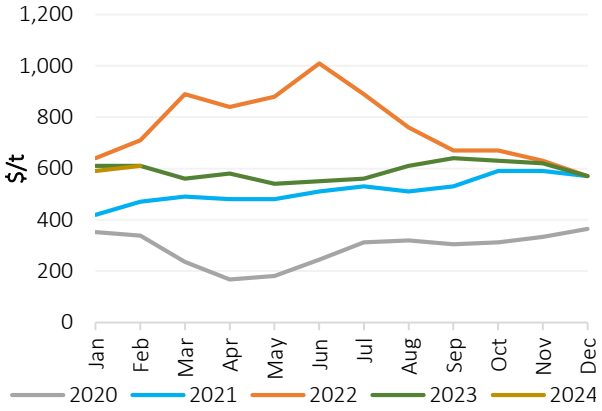
In February 2024, the average price of the leading shipping fuels was $610 per tonne, which was 3% higher m-o-m, and the same level of one year ago (Figure 103).

Figure 102: Average LNG spot charter rate



Source: GECF Secretariat based on data from ICIS LNG Edge and Argus

Figure 103: Average price of shipping fuels



Source: GECF Secretariat based on data from Bunker Ports News Worldwide and Argus

The GECF's assessment of LNG spot shipping costs for steam turbine carriers in February 2024 is shown in Table 2.

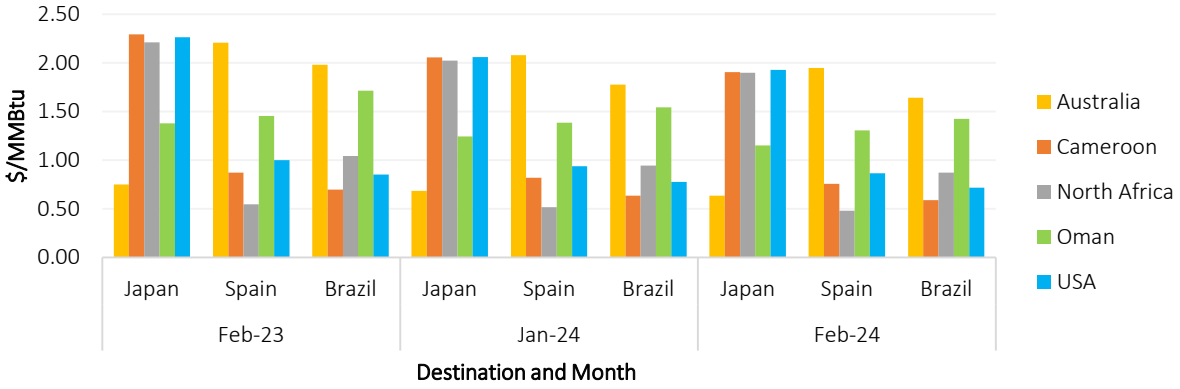
Table 2: Shipping costs for LNG spot cargoes from selected regions ($/MMBtu) – February 2024

		Destination						
LNG Supplier	To / From	Japan	China	India	UK	Spain	Argentina	Brazil
	Spot LNG delivered price	8.83	8.83	8.69	7.44	7.59	7.69	7.64
	Australia	0.64	0.67	0.77	2.01	1.95	1.50	1.64
	Cameroon	1.90	1.88	1.26	0.82	0.76	0.89	0.59
	North Africa	1.90	1.89	1.09	0.54	0.48	1.24	0.87
	Oman	1.15	1.07	0.25	1.37	1.31	1.43	1.42
	USA	1.93	2.12	2.07	0.89	0.87	1.18	0.72

Source: GECF Shipping Cost Model

In February 2024, the average LNG carrier spot charter rate and the delivered spot LNG prices decreased relative to the previous month, while the cost of LNG shipping fuels increased modestly. Consequently, there was a net decrease in the LNG spot shipping costs for steam turbine carriers by up to $0.15/MMBtu on certain routes, relative to the previous month (Figure 104). When compared with one year ago, in February 2024, the delivered spot LNG prices were much lower, while the monthly average spot charter rate also declined, resulting in LNG shipping costs of up to $0.39/MMBtu lower.

Figure 104: LNG spot shipping costs for steam turbine carriers



Source: GECF Shipping Cost Model

Chinese shipyard to begin construction of the world's largest LNG carriers: Market observers have speculated that the recent announcement of an order for eight ultra-large LNG tanks may be linked to the latest wave of LNG carrier fleet expansion being conducted by QatarEnergy. At the Gastech conference in September 2023, the Chinese shipyard Hudong-Zhonghua announced their new design for LNG carriers in the market, which would have a capacity of 271,000m³. This was followed in January 2024, by an order from QatarEnergy for eight LNG carriers. Now Hudong-Zhonghua has contracted the engineering firm Gaztransport and Technigaz to construct eight LNG tank having the same capacity. The vessels would be the largest on the global fleet, surpassing the 266,000m³ Q-Max carriers. Delivery of the vessels are expected in 2028 and 2029. This development follows the order placed by QatarEnergy in recent months for seventeen new vessels, each of capacity 174,000m³.

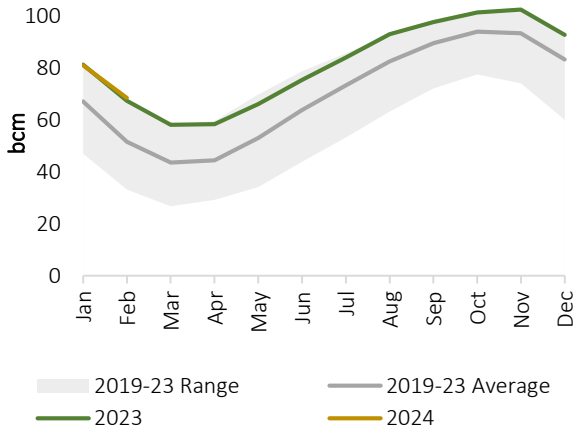
5 Gas Storage

5.1 Europe

The net gas withdrawal season continued in the EU countries. As such, in February 2024, the average daily volume of gas in storage decreased to 68.6 bcm, down from 81.1 bcm in the previous month (Figure 105). The average capacity utilisation of the UGS sites in the region decreased to 66%. There was 1.1 bcm more gas in storage than the average level recorded in February 2023.

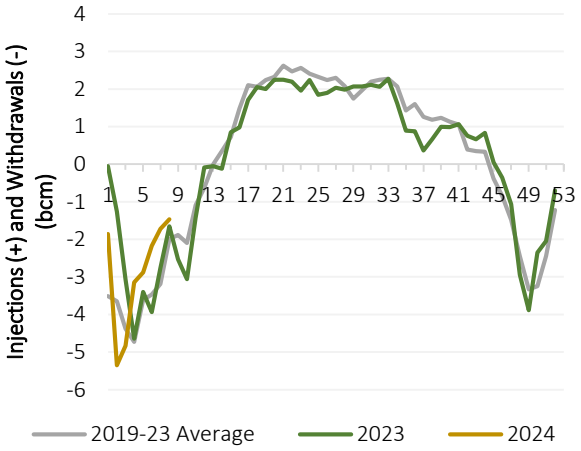
Furthermore, the delta between the quantity of gas in storage in February 2024 and the five-year average for the month widened to 16.9 bcm. As expected, net gas withdrawals were observed during all twenty-nine days of the month. In total, there were 9.0 bcm of gas taken out of storage during the month, compared with 1.2 bcm of gas injections into UGS sites.

Figure 105: Underground gas storage in the EU



Source: GECF Secretariat based on data from AGSI+

Figure 106: Weekly rate of EU UGS level changes



Source: GECF Secretariat based on data from AGSI+

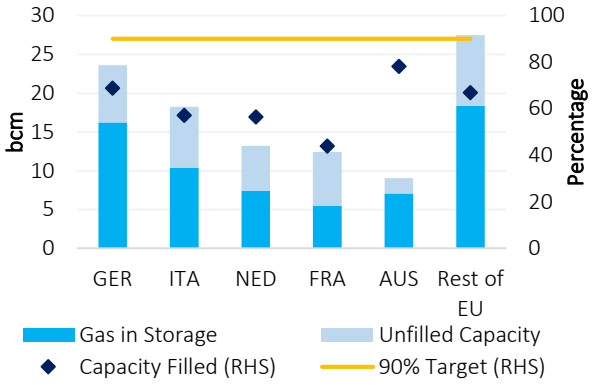
The average rate of gas withdrawal in February 2024 was 2.1 bcm/week (Figure 106). This average rate was less than the 2.9 bcm/week recorded in 2023, and lower than the five-year average withdrawal rate for that month at 3.1 bcm/week. This reflected the lower gas demand amidst ample gas imports and warmer than expected conditions. By the end of February 2024, there were 38.6 bcm of gas taken out of storage during the 2023/24 winter season.

Since 2022, the European Commission has established targets for the filling of gas storage sites in member states. EU countries are obliged to fill UGS sites to a minimum of 90% by 1 November 2024, with checkpoints set at different points of the year. According to this filling trajectory, the EU countries are collectively around 29.1 bcm more than the target for February 2024.

The top EU countries for UGS capacity are Germany, Italy, Netherlands, France and Austria. By the end of February 2024, gas storage levels in Austria and Germany remained above 70% of capacity, while Italy and the Netherlands stood just below 60% (Figure 107). The gas storage level in France plummeted to 44%.

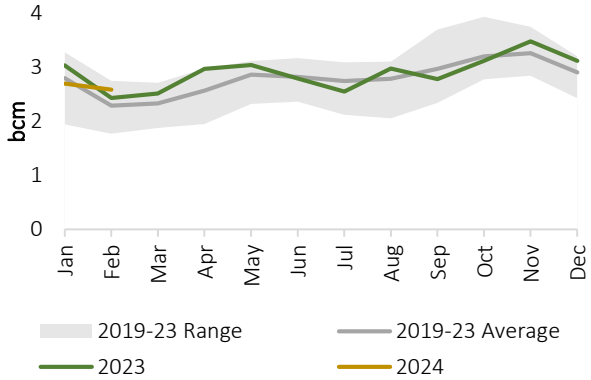
The EU has 5.0 bcm of LNG storage capacity, primarily concentrated in Spain (40%) and France (16%). In February 2024, the combined amount of LNG stored in the EU countries was 2.6 bcm (Figure 108). This quantity represented a 4% decrease m-o-m but was 13% higher than the five-year historical average for that month.

Figure 107: UGS in EU countries as of Feb 29, 2024



Source: GECF Secretariat based on data from AGSI+

Figure 108: Total LNG storage in the EU



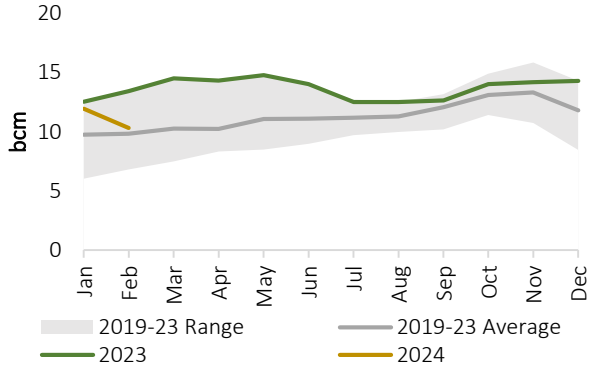
Source: GECF Secretariat based on data from ALSI

5.2 Asia

Japan and South Korea possess a combined capacity of 17 bcm of LNG storage. In February 2024, the combined volume of LNG in storage in both countries was estimated at 10.3 bcm, which was 14% lower than in the previous month (Figure 109). In addition, this volume was 23% lower y-o-y but was still 0.5 bcm higher than the five-year average for the month.

Storage in Japan and South Korea accounted for 5.0 bcm and 5.3 bcm, respectively.

Figure 109: LNG in storage in Japan and South Korea

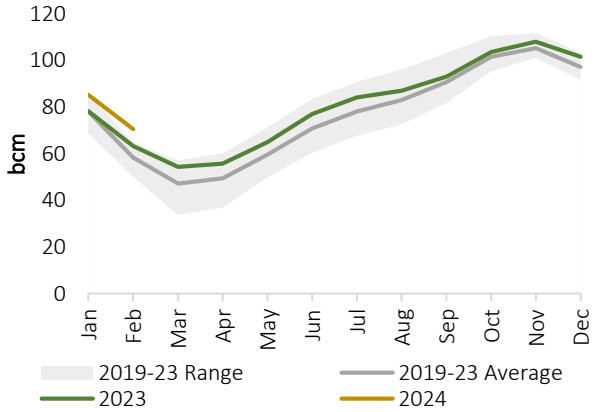


Source: GECF Secretariat based on data from Refinitiv

5.3 North America

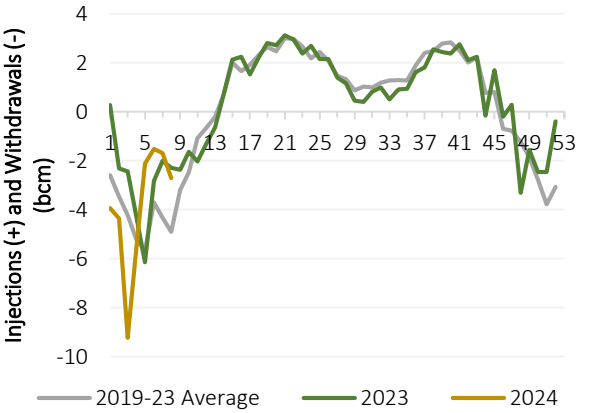
The net gas withdrawals season is also underway in the US. Accordingly, in February 2024, the average daily volume of gas in storage decreased to 70.5 bcm, down from 85.2 bcm in the previous month (Figure 110). The average capacity utilisation of UGS sites in the country decreased to 53%. The level of gas in storage in February 2024 was 7.2 bcm higher than one year ago, and 12.2 bcm higher than the five-year average. Gas withdrawals during the month was observed at an average rate of 2.0 bcm per week, compared with 3.3 bcm/week in February 2023 and the five-year rate of 4.7 bcm/week (Figure 111).

Figure 110: Underground gas storage in the US



Source: GECF Secretariat based on data from US EIA

Figure 111: Weekly rate of UGS changes in the US



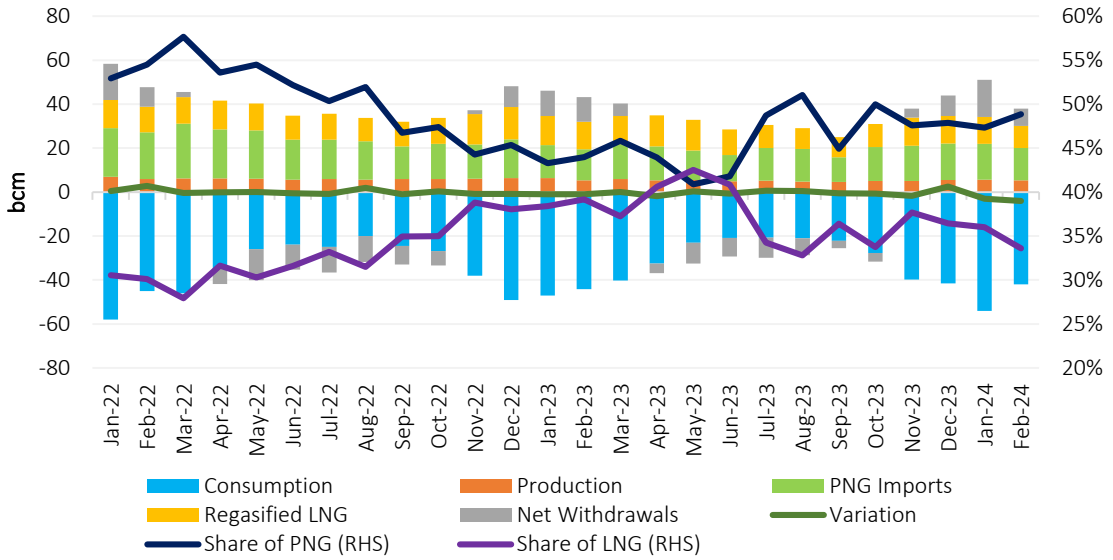
Source: GECF Secretariat based on data from US EIA

6 Gas Balance

6.1 EU + UK

In February 2024, the share of regasified LNG in the gas supply for the EU and the UK averaged 34%, marking a decrease from 36% in January 2024 and a significant decline from the previous year. Conversely, the share of gas imports via pipelines increased from 47% in January to 49% in February, and was notably higher y-o-y (Figure 112). The considerable decrease in regasified LNG send-out compared to pipeline gas imports contributed to the reduced share of regasified LNG in the gas supply and the increase in the share of pipeline gas imports. Moreover, the substantial y-o-y decline in regasified LNG send-out and a slight y-o-y increase in pipeline gas imports resulted in the decline in the share of regasified LNG and the rise in the share of pipeline gas imports in the gas supply for the EU and the UK.

Figure 112: EU + UK monthly gas balance



Note: Variation refers to losses and statistical differences

Source: GECF Secretariat based on data from AGSI+, JODI Gas and Refinitiv

Table 3 below provides data on the gas supply and demand balance for the EU + UK for the month of February 2024.

Table 3: EU + UK gas supply/demand balance for February 2024 (bcm)

	2023	Feb-23	Feb-24	YTD 2023	YTD 2024	Change* y-o-y	Change** 2024/2023
(a) Gas Consumption	380.85	44.20	42.00	91.30	96.10	-5%	5%
(b) Gas Production	63.46	5.39	5.29	11.73	10.99	-2%	-6%
Difference (a) - (b)	317.39	38.81	36.72	79.57	85.11	-5%	7%
PNG Imports	174.88	14.06	14.73	29.07	30.91	5%	6%
Regasified LNG	143.59	12.52	10.14	25.84	22.44	-19%	-13%
Net Withdrawals	-4.86	11.21	7.86	22.61	24.72	-30%	9%
Variation	3.78	1.02	3.98	2.06	7.05		

Source: GECF Secretariat based on data from AGSI+, JODI Gas and Refinitiv

Note: variation refers to statistical differences and losses

(*): y-o-y change for Feb 2024 compared to Feb 2023

(**): y-o-y change for YTD 2024 compared to YTD 2023

6.2 OECD

Table 4 below provides data on the gas supply and demand balance for all OECD countries, including OECD Americas, OECD Asia Oceania and OECD Europe for the month of November 2023.

Table 4: OECD's gas supply/demand balance for November 2023 (bcm)

	2022	Nov-22	Nov-23	YTD 2022	YTD 2023	Change* y-o-y	Change** 2023/2022
(a) OECD Gas Consumption	1806.4	152.8	159.4	1614.0	1588.5	4.4%	-1.6%
(b) OECD Gas Production	1671.8	140.4	142.5	1528.1	1550.5	1.5%	1.5%
Difference (a) - (b)	134.6	12.4	16.9	85.9	38.0	36.5%	-55.8%
OECD LNG Imports	346.9	24.6	22.1	251.7	243.0	-10.3%	-3.4%
LNG Imports from GECF	161.8	12.6	9.8	120.2	109.6	-22.3%	-8.8%
LNG Imports from Non-GECF	185.1	12.0	12.3	131.4	133.4	2.3%	1.5%
OECD LNG Exports	223.2	18.8	20.7	203.2	216.8	9.7%	6.7%
Intra-OECD LNG Trade	152.7	10.5	11.3	113.9	119.6	8.3%	5.0%
OECD Pipeline Gas Imports	632.0	49.5	48.5	644.5	508.6	-2.0%	-21.1%
OECD Pipeline Gas Exports	565.1	42.9	38.6	519.1	437.8	-10.0%	-15.7%
Stock Changes and losses	56.0	0.0	-5.6	87.9	59.1		

Source: GECF Secretariat based on data from ICIS LNG Edge and IEA Monthly Gas Statistics
(*): y-o-y change for Nov 2023 compared to Nov 2022
(**): y-o-y change for YTD 2023 compared to YTD 2022

6.3 India

Table 5 below provides data on the gas supply and demand balance for India for the month of January 2024.

Table 5: India's gas supply/demand balance for January 2024 (bcm)

	2023	Jan-23	Jan-24	YTD 2023	YTD 2024	Change* y-o-y	Change** 2024/2023
(a) India Gas Consumption	62.31	4.82	5.49	4.82	5.49	13.9%	13.9%
(b) India Gas Production	35.09	2.91	3.08	2.91	3.08	5.9%	5.9%
Difference (a) - (b)	27.22	1.91	2.41	1.91	2.41	26.2%	26.2%
India LNG Imports	30.27	1.97	2.86	1.97	2.86	45.2%	45.2%
LNG Imports from GECF	23.57	1.72	2.48	1.72	2.48	44.2%	44.2%
LNG Imports from Non-GECF	6.70	0.25	0.38	0.25	0.38	52.0%	52.0%
Stock Changes and losses	3.05	0.06	0.45	0.06	0.45		

Source: GECF Secretariat based on data from ICIS LNG Edge and India's PPAC
(*): y-o-y change for Jan 2024 compared to Jan 2023
(**): y-o-y change for YTD 2024 compared to YTD 2023

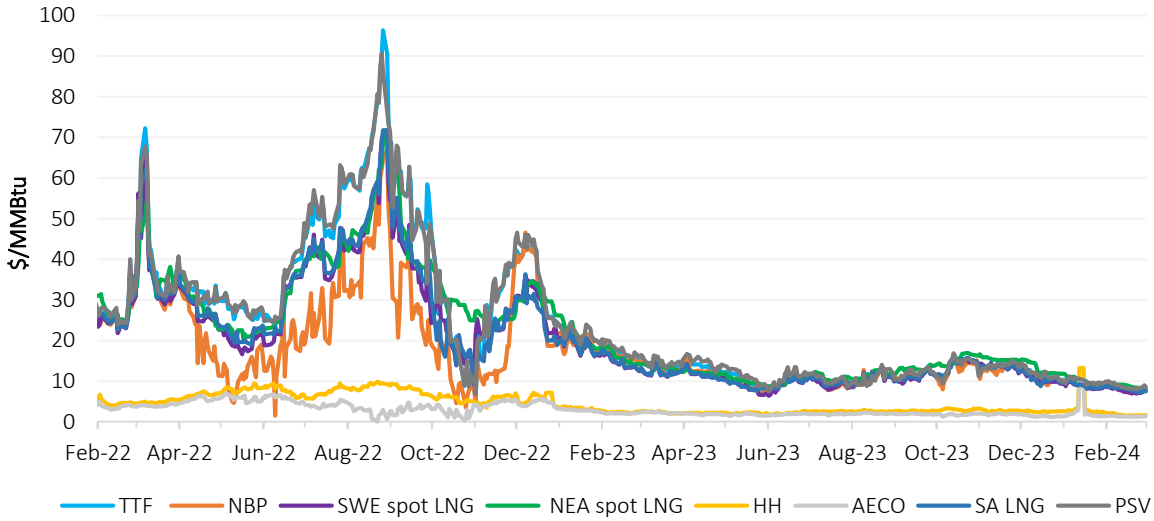
7 Energy Prices

7.1 Gas Prices

7.1.1 Gas & LNG Spot Prices

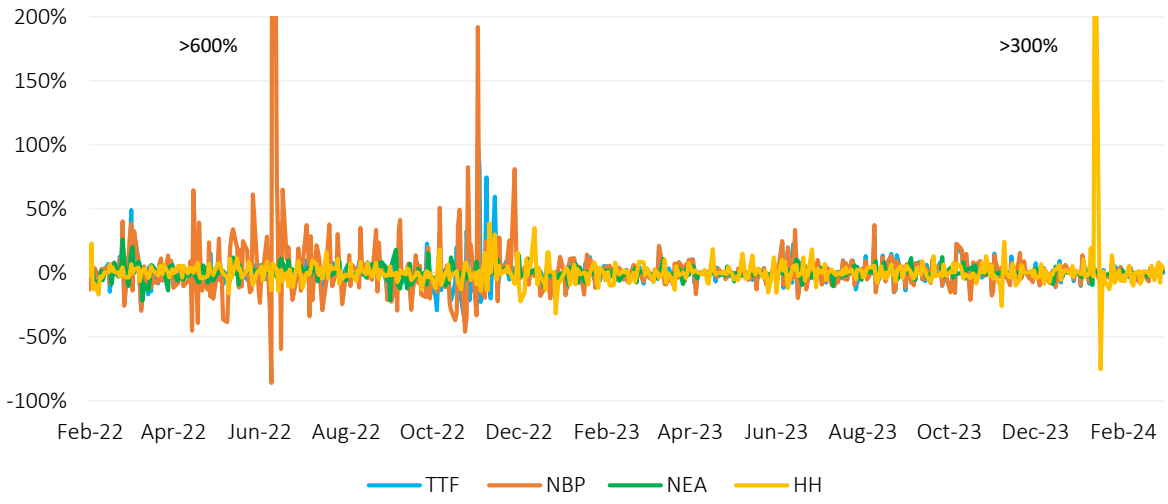
In February 2024, gas and LNG spot prices in Europe and Asia maintained a downward trend for the third consecutive month, with volatility remaining relatively low (Figure 113 and Figure 114). The decline in spot prices was primarily influenced by bearish market fundamentals. On the demand side, spot prices were pressured by above-normal temperatures in Europe and Asia. Concurrently, a robust LNG supply and elevated storage levels ensured ample supply in both regions. Additionally, outages at Freeport LNG Train 3 and some Norwegian gas facilities had a negligible effect on price movements. In the upcoming months, increased demand from price-sensitive countries in South and Southeast Asia could potentially bolster spot prices.

Figure 113: Daily gas & LNG spot prices



Source: GECF Secretariat based on data from Argus and Refinitiv Eikon
Note: SA LNG price is an average of the LNG delivered prices for Argentina, Brazil and Chile based on Argus assessment.

Figure 114: Daily variation of spot prices

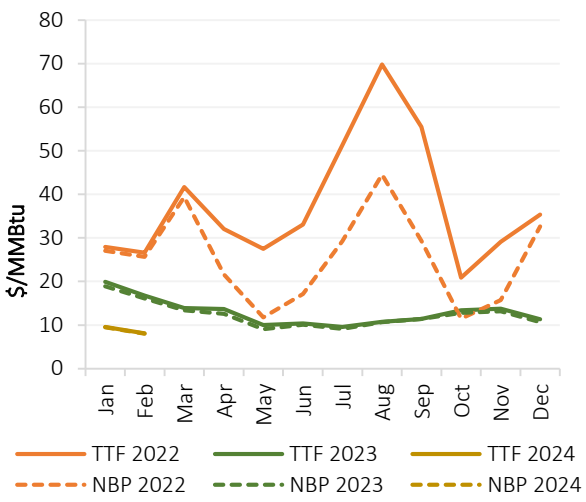


Source: GECF Secretariat based on data from Argus and Refinitiv Eikon

7.1.1.1 European Spot Gas and LNG Prices

In February 2024, TTF spot gas prices averaged $8.11/MMBtu, reflecting a 15% decline m-o-m and a 52% decline y-o-y. In addition, NBP spot prices averaged $7.99/MMBtu, reflecting a 16% decrease m-o-m and a 50% decrease y-o-y (Figure 115). The SWE spot LNG prices averaged $7.60/MMBtu in February 2024 (13% decrease m-o-m and 48% decrease y-o-y). In addition, the PSV spot price averaged $8.73/MMBtu in February 2024 (12% decrease m-o-m and 51% decrease y-o-y).

Figure 115: Monthly European spot gas prices



Source: GECF Secretariat based on data from Refinitiv Eikon

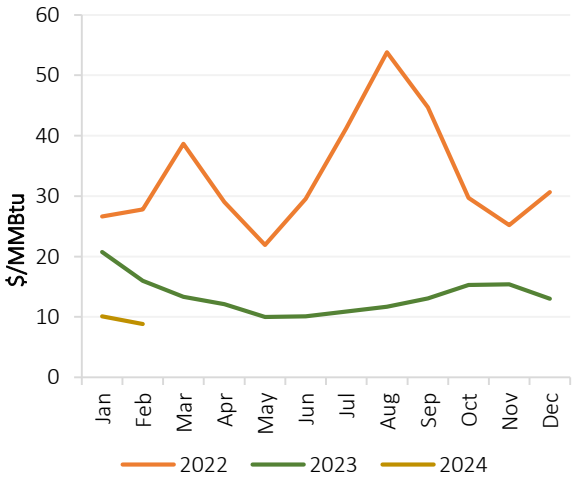
European gas and LNG spot prices declined for the third consecutive month. Supply and demand fundamentals remained balanced, as warm weather and increased wind generation offset the unplanned maintenance at the Troll gas field and Nyhamna gas processing plant in Norway. Daily TTF spot prices dropped to $7.4/MMBtu, marking the lowest level since June 2023.

From January to February 2024, TTF and NBP averaged $8.83/MMBtu and $8.73/MMBtu, respectively, representing substantial declines of 52% and 50% y-o-y, respectively.

7.1.1.2 Asian Spot LNG Prices

In February 2024, the average North East Asia (NEA) spot LNG price experienced a decrease of 12% m-o-m, reaching an average of $8.84/MMBtu. This represents a 45% decrease y-o-y (Figure 116).

Figure 116: Monthly Asian spot LNG prices



Source: GECF Secretariat based on data from Argus and Refinitiv Eikon

Asian LNG prices continued to decline driven by subdued demand amid above-normal temperatures and ample storage levels in the region. The Chinese Lunar New Year holidays further suppressed industrial demand due to factory closures. Moreover, the outage at Freeport LNG Train 3, which started on January 17, 2024, had minimal impact on spot prices. Daily NEA spot LNG prices declined to $8.2/MMBtu, reaching the lowest since April 2021.

From January to February 2024, the average NEA spot LNG price stood at $9.47/MMBtu, representing a 48% y-o-y decrease.

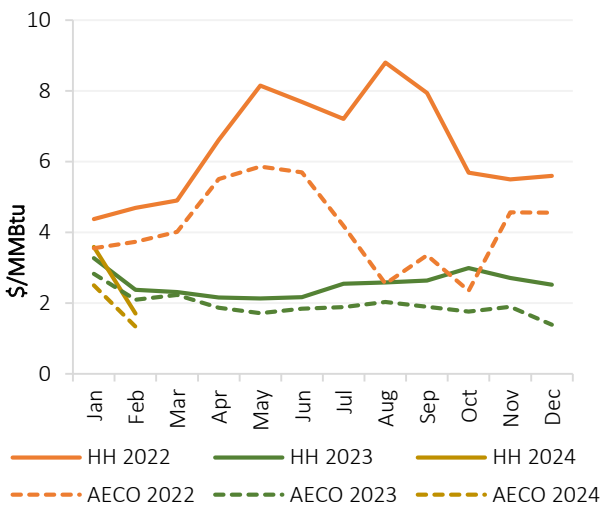
7.1.1.3 North American Spot Gas Prices

In February 2024, the HH spot gas price averaged $1.71/MMBtu, reflecting a decline of 52% m-o-m. Additionally, it was 28% lower than the average price of $2.38/MMBtu observed in February 2023. (Figure 117).

Following the uptick last month due to freezing temperatures, Henry Hub prices experienced a significant decline as temperatures returned to normal. Furthermore, daily HH spot prices dropped to record lows, falling to $1.5/MMBtu on February 20, 2024, marking the lowest since October 2020.

Similarly, in Canada, the AECO spot price averaged $1.34/MMBtu in February 2024, reflecting a decrease of 46% m-o-m and 36% y-o-y.

Figure 117: Monthly North American gas spot prices



Source: GECF Secretariat based on data from Argus and Refinitiv Eikon

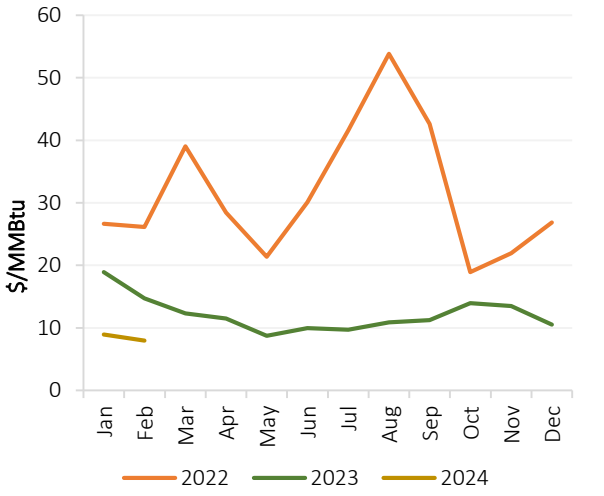
From January to February 2024, the HH spot price averaged $2.65/MMBtu, representing a decline of 6% y-o-y. Meanwhile, the AECO spot price averaged $1.92/MMBtu, marking a 22% y-o-y decrease.

7.1.1.4 South American Spot LNG Prices

In February 2024, the South American (SA) LNG price experienced an 11% m-o-m decrease, averaging $7.97/MMBtu. Additionally, the SA LNG price was 46% lower compared to the average price of $14.73/MMBtu observed in February 2023 (Figure 118).

LNG spot prices in South America continued to align with the trends observed in European and Asian spot prices. The average delivered prices for LNG in Argentina, Brazil and Chile averaged $7.91/MMBtu, $7.84/MMBtu and $8.16/MMBtu, respectively.

Figure 118: Monthly South American LNG spot prices



Source: GECF Secretariat based on data from Argus
Note: SA LNG price is an average of the LNG delivered prices for Argentina, Brazil and Chile based on Argus assessment

7.1.2 Spot and Oil-indexed Long-Term LNG Price Spreads

In February 2024, the average Oil-indexed I LNG price was $12.94/MMBtu, reflecting declines of 1% m-o-m and 5% y-o-y. Similarly, the Oil-indexed II LNG price averaged $9.53/MMBtu, showing a 2% decrease m-o-m and a 6% decrease y-o-y (Figure 119). Furthermore, Oil-indexed I prices maintained an average premium of $4/MMBtu over NEA spot LNG prices. Additionally, Oil-indexed II prices held an average premium of $1/MMBtu over the NEA spot LNG prices.

In Europe, the Oil-indexed III price averaged $8.43/MMBtu in February 2024, reflecting a 1% increase m-o-m, but remained 15% lower y-o-y (Figure 120). Moreover, Oil-indexed III prices held a premium of $1/MMBtu over the average SWE LNG price.

From January to February 2024, the Oil-indexed I LNG price exhibited a 6% increase y-o-y, while the Oil-indexed II LNG price showed a 3% decrease y-o-y. Additionally, the Oil-indexed III LNG price for the same period was 13% lower y-o-y.

Figure 119: Asia: Spot and oil-indexed price spread

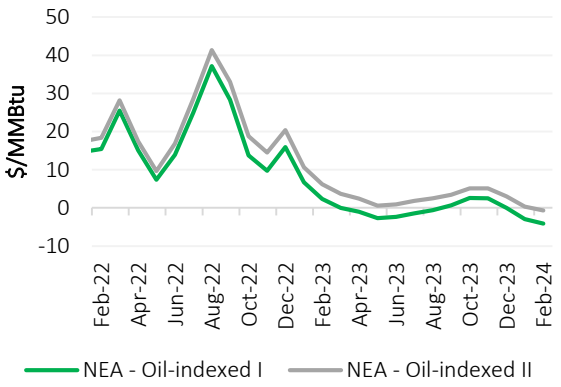
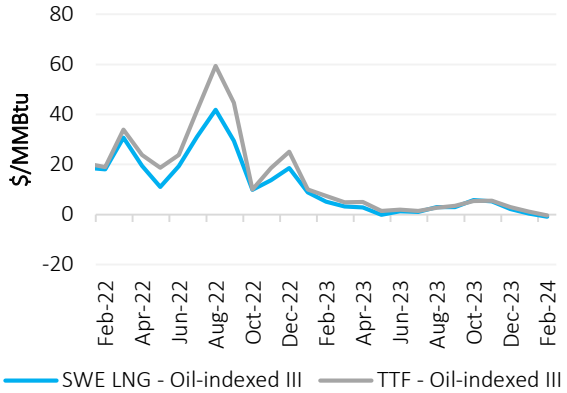


Figure 120: Europe: Spot and oil-indexed price spread



Source: GECF Secretariat based on data from Argus and Refinitiv Eikon
Note: Oil-indexed I LNG prices are calculated using the traditional LTC slope (14.9%) and 6-month historical average of Brent. Oil-indexed II LNG prices are calculated using the 5-year historical average LTC slope (11.4% for 2024) and 3-month historical average of Brent. Oil-indexed III LNG prices are based on Argus' assessment for European oil-indexed long-term LNG prices.

7.1.3 Regional Spot Gas & LNG Price Spreads

In February 2024, the NEA-TTF price spread remained positive, and increased slightly compared to the previous month. The average premium of NEA LNG spot price over the average TTF spot price was $0.73/MMBtu. Both benchmark prices experienced similar bearish movement during the month (Figure 121).

NBP traded at a discount of $0.12/MMBtu compared to TTF, which was higher than the average discount of $0.08/MMBtu in the previous month (Figure 122). The NBP-TTF spread remained negative but widened due to a loose UK gas market.

Furthermore, the NWE LNG-TTF spread remained negative, with the NWE LNG spot price trading at a discount of $0.51/MMBtu compared to TTF, indicating high LNG sendout in the region (Figure 123). The NWE LNG-SA LNG price spread was negative, averaging $0.37/MMBtu (Figure 124). Meanwhile, the NEA-HH and TTF-HH spreads both widened to $7.13/MMBtu and $6.40/MMBtu, respectively (Figure 125 and Figure 126). The premium of the Asian and European spot prices over North American spot prices increased during the month.

Figure 121: NEA-TTF price spread

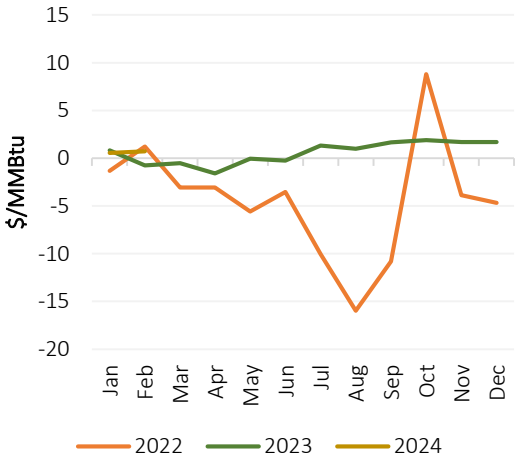


Figure 122: NBP-TTF price spread

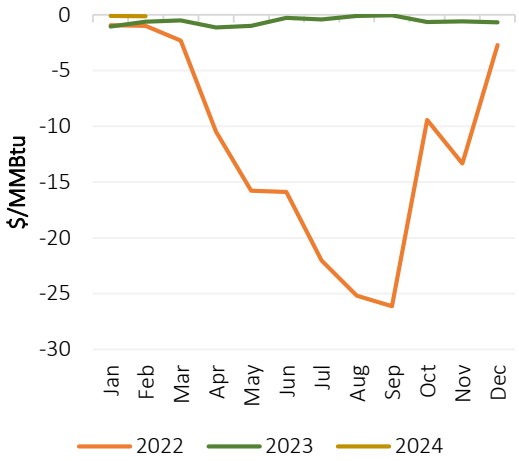


Figure 123: NWE LNG-TTF price spread

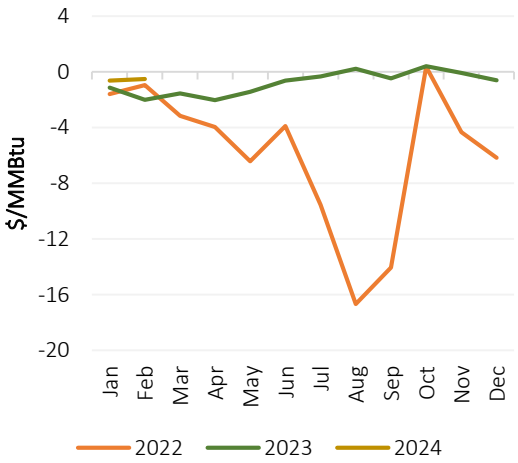


Figure 124: NWE LNG – SA LNG price spread

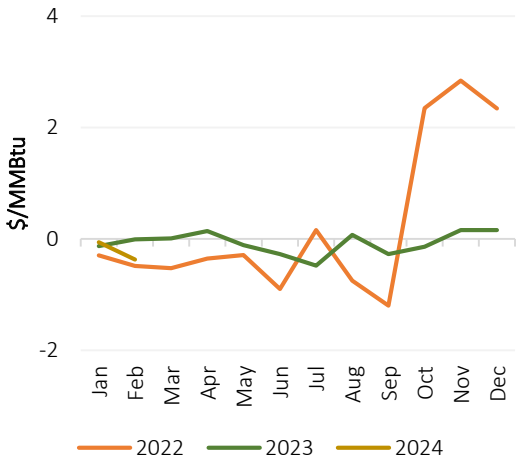


Figure 125: NEA-HH price spread

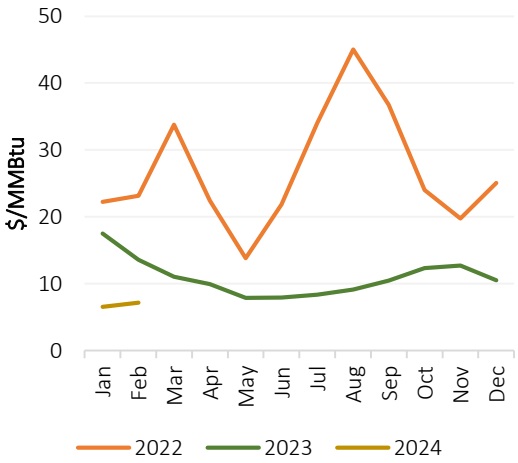
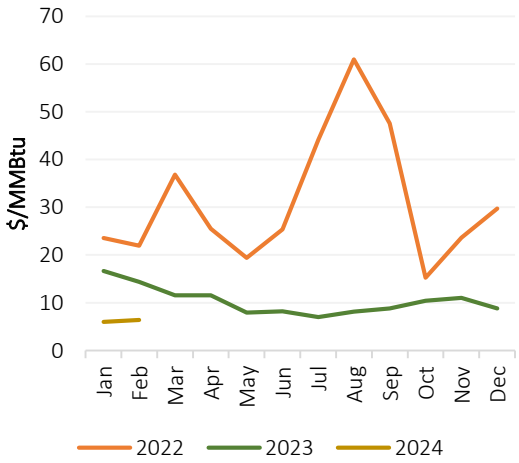


Figure 126: TTF-HH price spread



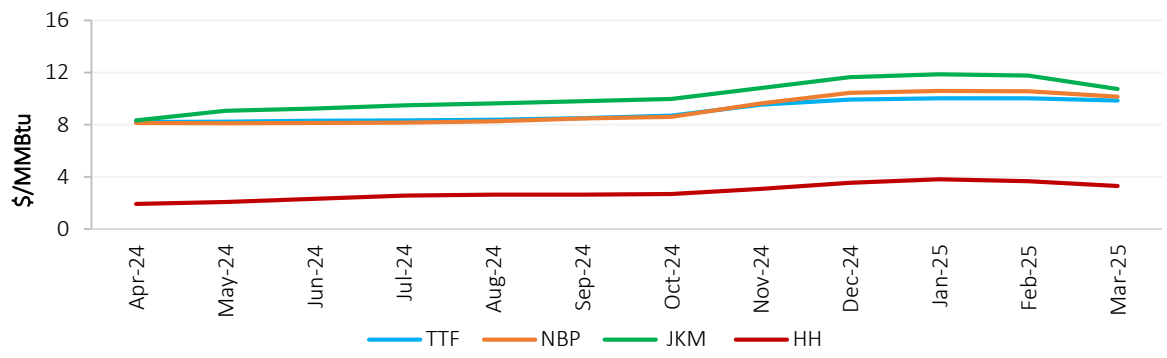
Source: GECF Secretariat based on data from Argus and Refinitiv Eikon

7.1.4 Gas & LNG Futures Prices

For the six-month period spanning from April to September 2024, the JKM-TTF futures price spread is expected to remain positive, reflecting the likelihood for Asian LNG prices to maintain a premium over European spot prices. In March 2024, JKM is expected to trade at a small premium of $0.1/MMBtu compared to TTF. However, in May and June 2024, the JKM-TTF spread is projected to widen to $0.8/MMBtu. Subsequently, from July – September 2023, it remains above $1/MMBtu. Additionally, the NBP-TTF spread is expected to be negligible in the same six-month period, with both prices converging (Figure 127).

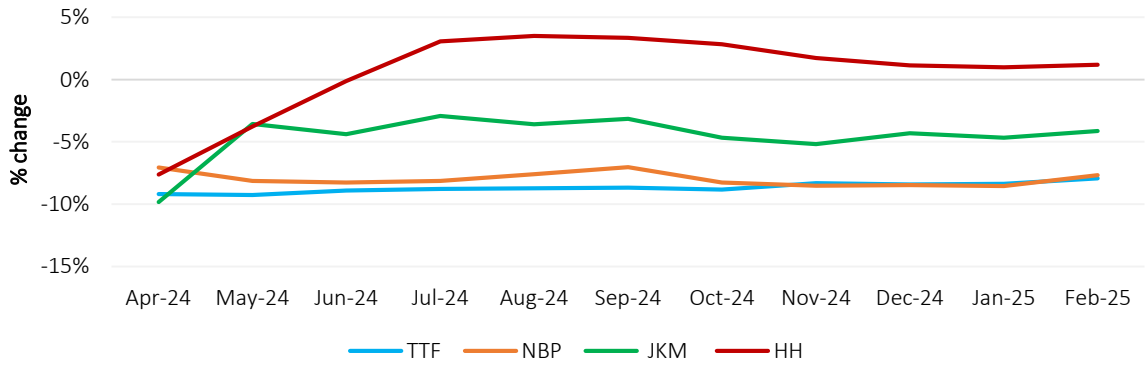
Moreover, gas and LNG futures prices for TTF, NBP and JKM for the six-month period from April to September 2024, (as of March 5, 2024) are lower than the futures prices expectations considered on February 6, 2024 (as reported in the GECF MGMR February 2024). Moreover, as of March 5, 2024, the average futures prices for TTF, NBP and JKM during the same six-month period are $8.32/MMBtu, $8.21/MMBtu and $9.26/MMBtu, respectively. Meanwhile, the average HH futures price is $2.36/MMBtu, which is slightly higher than previous expectations (Figure 128).

Figure 127: Gas & LNG futures prices



Source: GECF Secretariat based on data from Refinitiv Eikon
Note: Futures prices as of March 5, 2024.

Figure 128: Variation in gas & LNG futures prices



Source: GECF Secretariat based on data from Refinitiv Eikon
Note: Comparison with the futures prices as of February 6, 2024, as reported in GECF MGMR February 2024.

7.2 Cross Commodity Prices

7.2.1 Oil Prices

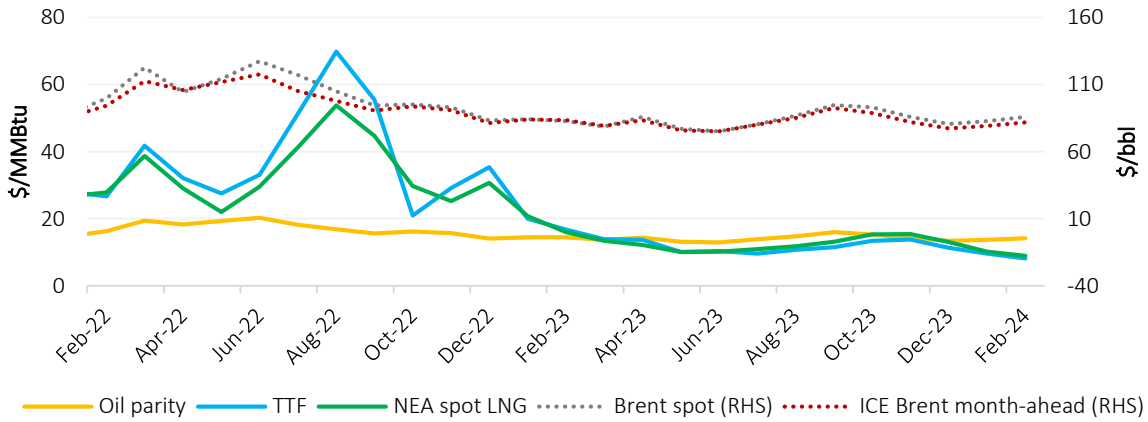
In February 2024, the average Brent spot price was $85.92/bbl, reflecting increases of 4% both m-o-m and y-o-y (Figure 129). The Brent month-ahead price averaged $81.72/bbl, marking a 3% increase m-o-m and a 2% decrease y-o-y.

Oil prices rose for the second consecutive month, driven by increased concerns over escalating tensions in the Middle East, and a decline in US oil product inventories. Despite this, market fundamentals remained bearish, particularly with worries about economic growth in China. At the beginning of March, OPEC+ announced it would extend voluntary supply cuts of 2.2 million barrels per day (bpd) into the second quarter. Additionally, Russia committed to reducing its production by an extra 471,000 bpd, building on the 500,000 bpd reduction implemented in the first quarter.

Furthermore, in February 2024, TTF spot prices traded at a higher discount to the oil parity price of $6/MMBtu, compared to the previous month. Similarly, NEA LNG spot prices maintained a discount of $5/MMBtu to the oil parity price.

From January to February 2024, the average Brent spot price was $84.32/bbl, representing a 1% increase y-o-y. Similarly, the average Brent month-ahead price was $80.44/bbl, representing a 4% decrease y-o-y.

Figure 129: Monthly crude oil prices



Source: GECF Secretariat based on data from Argus and Refinitiv Eikon
Note: Conversion factor of 5.8 was used to calculate the oil parity price in $/MMBtu based on the ICE Brent month-ahead price.

7.2.2 Coal Prices

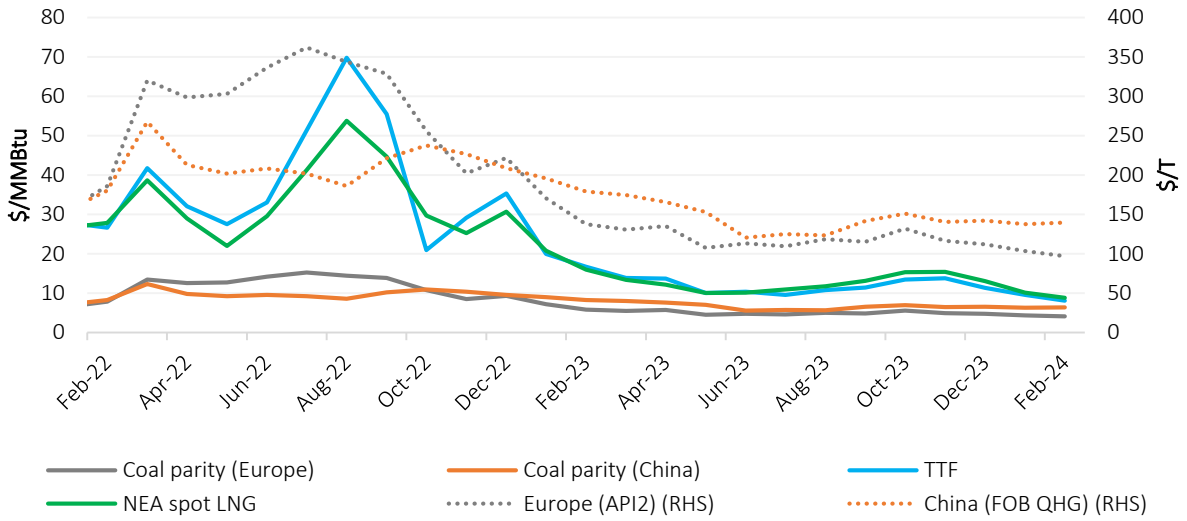
In February 2024, the European coal price (API2) averaged $97.04/T, decreasing by 6% m-o-m and 29% y-o-y. Meanwhile, in China, the QHG coal price averaged $139.60/T, reflecting an increase of 2% m-o-m and a decline of 22% y-o-y (Figure 130).

European coal prices declined for the fifth consecutive month, influenced by above-normal temperatures that reduced coal demand in the region. Furthermore, lower gas prices encourage coal-to-gas switching, further diminishing demand for coal.

The premium of TTF spot price over the API2 parity price decreased by 22% m-o-m to $4/MMBtu in February 2024. Additionally, the premium of NEA spot LNG price over the QHG parity price decreased by 36% m-o-m to $2.4/MMBtu.

From January to February 2024, the European API2 averaged $100.18/T, representing a 35% decrease y-o-y. Meanwhile, the Chinese QHG price averaged $138.52/T, which was 26% lower y-o-y.

Figure 130: Monthly coal parity prices



Source: GECF Secretariat based on data from Argus and Refinitiv Eikon
Note: Conversion factors of 23.79 and 21.81 were used to calculate the coal prices in $/MMBtu for Europe (API2) and China (QHG) respectively.

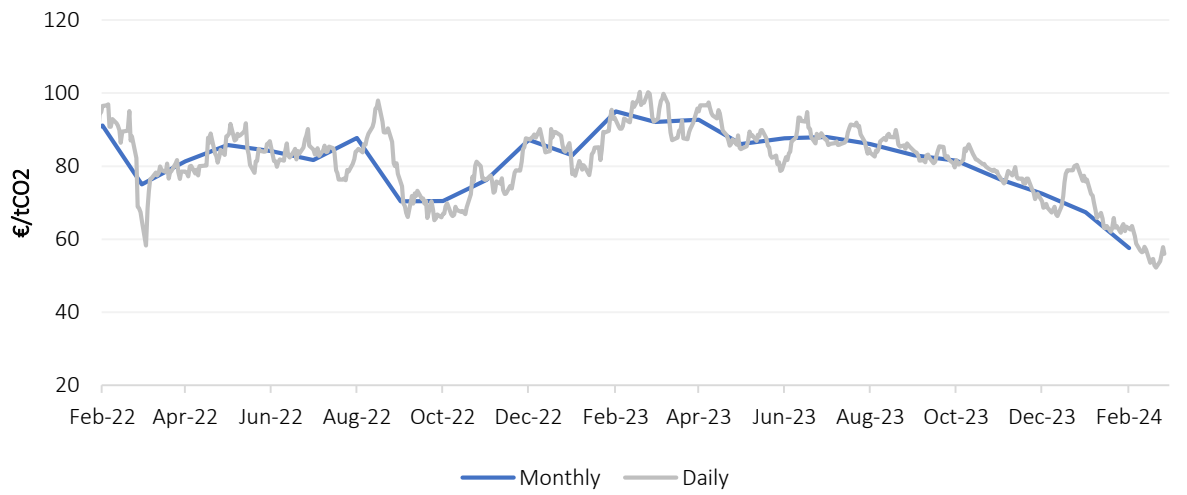
7.2.3 Carbon Prices

In February 2024, EU carbon prices averaged €57.61/tCO_2, reflecting a 15% decline m-o-m, and 39% y-o-y (Figure 131).

EU carbon prices continued to decline, with daily prices reaching €52.22/tCO_2, marking the lowest level since July 2021. Weak market fundamentals, in particular reduced demand in the power sector persisted during the month, which suppressed demand for EU allowances.

From January to February 2024, EU carbon prices averaged €62.52/tCO2, representing a decline of 30% y-o-y.

Figure 131: EU carbon prices

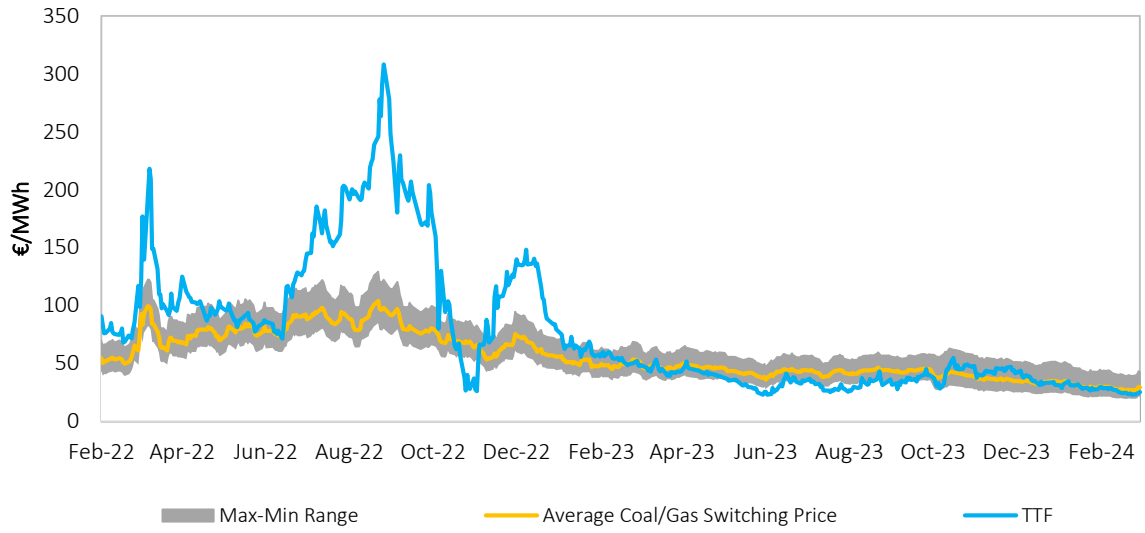


Source: GECF Secretariat based on data from Refinitiv Eikon

7.2.4 Fuel Switching

In February 2024, daily TTF spot prices stayed within the range that is favorable for coal-to-gas switching. The average coal-to-gas switching price experienced a decline of 9% m-o-m to reach €28.19/MWh. Additionally, as TTF spot prices also continued to fall, the monthly spread between the TTF spot price and the coal-to-gas switching price became more negative compared to the previous month, averaging -€2/MWh (Figure 132). Looking ahead to April 2024, the TTF spot price is likely to remain below the average coal-to-gas switching price, potentially encouraging coal-to-gas switching in Europe.

Figure 132: Daily TTF vs coal-to-gas switching prices



Source: GECF Secretariat based on data from Refinitiv Eikon
Note: Coal-to-gas switching price is the price of gas at which generating electricity with coal or gas is equal. The estimate takes into consideration coal prices, CO2 emissions prices, operation costs and power plant efficiencies. The efficiencies considered for gas plants are max: 56%, min: 46%, avg: 49.13%. The efficiencies considered for coal plants are max: 40%, min: 34%, avg: 36%.

8 Abbreviations

Abbreviation	Explanation
AE	Advanced Economies
AECO	Alberta Energy Company
bcm	Billion cubic metres
bcma	Billion cubic metres per annum
bcm/yr	Billion cubic metres per year
CBAM	Carbon Border Adjustment Mechanism
CBM	Coal bed methane
CCS	Carbon, Capture and Storage
CCUS	Carbon Capture, Utilization and Storage
CDD	Cooling Degree Days
CNG	Compressed Natural Gas
CO_2	Carbon dioxide
CO_{2e}	Carbon dioxide equivalent
CPI	Consumer Price Index
DOE	Department of Energy
EC	European Commission
ECB	European Central Bank
EEXI	Energy Efficiency Existing Ship Index
EMDE	Emerging Markets and Developing Economies
EU	European Union
EU ETS	European Union Emissions Trading Scheme
EUA	European Union Allowance
Fed	Federal Reserve
FID	Final Investment Decision
FSU	Floating Storage Unit
FSRU	Floating Storage Regasification Unit

G7	Group of Seven
GDP	Gross Domestic Product
GECF	Gas Exporting Countries Forum
GHG	Greenhouse Gas
HDD	Heating Degree Days
HH	Henry Hub
IEA	International Energy Agency
IMF	International Monetary Fund
IMO	International Maritime Organization
JKM	Japan Korea Marker
LNG	Liquefied Natural Gas
LAC	Latin America and the Caribbean
LT	Long term
MMBtu	Million British thermal units
mmcm	Million cubic metres
MENA	Middle East and North Africa
METI	Ministry of Trade and Industry in Japan
m-o-m	month-on-month
Mt	Million tonnes
Mtpa	Million tonnes per annum
MWh	Megawatt hour
NEA	North East Asia
NBP	National Balancing Point
NDC	Nationally Determined Contribution
NGV	Natural Gas Vehicle
NZBA	Net-Zero Banking Alliance
OECD	Organization for Economic Co-operation and Development
PNG	Pipeline Natural Gas

PPAC	Petroleum Planning & Analysis Cell
QHG	Qinhuangdao
R-LNG	Regasified LNG
SA	South America
SPA	Sales and Purchase Agreement
SWE	South West Europe
T&T	Trinidad and Tobago
TANAP	Trans-Anatolian Natural Gas Pipeline
TCFD	Task Force on Climate-Related Financial Disclosure
Tcm	Trillion cubic metres
tCO2	Tonne of carbon dioxide
TTF	Title Transfer Facility
TWh	Terawatt hour
UGS	Underground Gas Storage
UAE	United Arab Emirates
UK	United Kingdom
UQT	Upward Quantity Tolerance
US	United States
y-o-y	year-on-year

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