GECF

Gas Exporting Countries Forum

MONTHLY GAS MARKET REPORT

January 2025

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Disclaimer

About GECF

The Gas Exporting Countries Forum (GECF) is an intergovernmental organization comprising the world's leading gas exporters, aimed at fostering cooperation and collaboration among its members by providing a platform for the exchange of views, experiences, information, and data on gas-related matters. The GECF includes 20 countries — 12 member countries and 8 observer countries — spanning four continents. Member countries are Algeria, Bolivia, Egypt, Equatorial Guinea, Iran, Libya, Nigeria, Qatar, Russia, Trinidad and Tobago, United Arab Emirates, and Venezuela, while observer countries include Angola, Azerbaijan, Iraq, Malaysia, Mauritania, Mozambique, Peru, and Senegal.

The GECF Monthly Gas Market Report (MGMR) is a monthly publication by the GECF that provides insights into short-term developments in the global gas market, covering areas such as the global economy, gas consumption, gas production, gas trade (both pipeline gas and LNG), gas storage, and energy prices.

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Highlights

Gas consumption: In December 2024, the EU recorded its fourth consecutive y-o-y increase in gas consumption, rising by 9% to 40 bcm, after seven months of continuous decline. This rise was mainly driven by the residential and electricity sectors, influenced by a cold spell and notably lower wind power output. Similarly, US gas consumption saw a significant y-o-y increase of 5.1%, reaching 93 bcm. In November 2024, China's apparent gas demand rose by 1.7% y-o-y to 35.6 bcm, driven by increased LNG fuel demand for trucks and higher gas-fired power generation.

Gas production: In December 2024, US gas production continued its declining trend to stand at 88.6 bcm, representing a 4.1% y-o-y reduction. This decline reflects the combined effect of the Hurricane season on Gulf of Mexico operations and production cuts in response to low Henry Hub prices. In November 2024, Europe's gas production fell by 2.1% y-o-y to reach 15.9 bcm, primarily due to reduced output from Norway and extended maintenance periods. Gas production in the Asia Pacific region was estimated to have decreased by 0.2% y-o-y, driven by a slower growth rate in Chinese production (3.7% y-o-y) and a reduction in output from several other major Asian gas producers. On the upstream front, Mauritania and Senegal – two GECF member countries – began gas production from their joint Greater Tortue Ahmeyim (GTA) offshore project.

Gas trade: In December 2024, global LNG imports fell for the second consecutive month, declining by 0.3% y-o-y to 38.2 Mt. The decrease was driven by reduced imports in Asia Pacific and Europe, partly offset by stronger inflows into the LAC and MENA regions. Asia Pacific LNG imports saw their only monthly y-o-y drop for 2024, attributed to mild winter weather, ample storage levels, and higher spot LNG prices. Europe's LNG imports, though down y-o-y, reached their highest level since January 2024, while PNG imports slightly increased to reach 13.7 bcm. In terms of infrastructure development, the U.S. Plaquemines LNG facility marked a milestone by exporting its first LNG cargo.

Gas storage: Gas stocks were depleting in the northern hemisphere regions in December 2024, driven by increasing heating demand. The EU recorded a particularly large withdrawal, with the monthly average volume of gas in storage decreasing to 82 bcm (79% of the regional capacity), compared with 93 bcm a year ago. Net withdrawals commenced by the middle of November in the US, bringing the average gas storage level down to 101 bcm (76% of the country's capacity), almost the same level as a year ago. In Asia, the combined volume of LNG in storage in Japan and South Korea decreased to 13.8 bcm, which is less than the 14.9 bcm in storage at the same stage last year.

Energy prices: European gas and LNG spot prices held steady compared to the previous month, while Asian LNG prices experienced a slight increase in December 2024. The TTF spot price averaged $13.82/MMBtu, while the average NEA spot LNG price averaged $14.21/MMBtu, up by 1% m-o-m. Meanwhile, in the US, the Henry Hub spot price averaged $3.01/MMBtu, increasing significantly by 38% m-o-m. Looking ahead, weather conditions are expected to remain a critical factor influencing spot prices, with any cold snaps likely to exert additional upward pressure.

Feature article: The LNG shipping industry is well prepared to accommodate LNG supply from a new wave of liquefaction projects

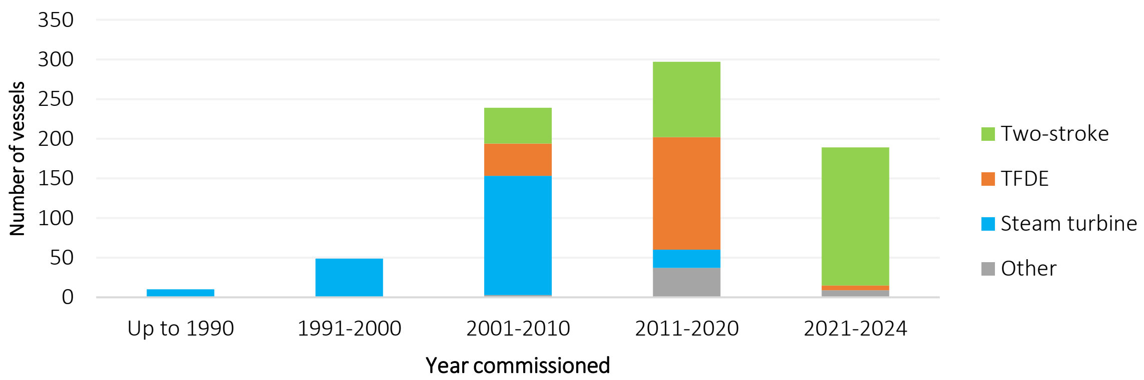
As global demand for energy continues to rise, LNG trade has seen substantial growth in recent years. This trend has been accompanied by a parallel expansion of the LNG carrier fleet, which has grown from 60 vessels in 2000 to 780 carriers in 2024. This nearly thirteen-fold increase highlights the rising significance of LNG shipping, which has outpaced all other segments of the global gas supply chain in terms of growth.

The LNG shipping market is divided into two segments: long-term and spot chartering. Long-term chartering involves carriers that serve long-term LNG supply contracts and are assigned to fixed, predictable routes between designated liquefaction and regasification terminals. In contrast, spot chartering serves the spot LNG trading market, which represents about 30% of global LNG trade. These two segments generally operate independently, with little overlap.

Additionally, the LNG carrier fleet is categorized into three main elements based on propulsion technology: steam turbine, TFDE (tri-fuel diesel electric), and two-stroke engines (Figure i). While all types of carriers use LNG boil-off for propulsion, they also rely on other fuels: steam turbine vessels use HFO (heavy fuel oil), TFDE vessels consume marine diesel oil and HFO/ LSFO (low-sulphur fuel oil), and two-stroke vessels use marine gasoil, LSFO, and LNG bunker fuel.

Steam turbine LNG carriers, the first generation of the fleet, account for 30% of the total fleet. While these vessels are being gradually replaced by newer, larger, and more fuel-efficient carriers, they continue to play a crucial role in spot LNG trade, especially during peak demand periods, such as the winter months in the northern hemisphere. As new-generation LNG carriers are primarily deployed for long-term chartering, a growing number of steam turbine vessels, once dedicated to long-term contracts, are being redirected to the spot market.

Figure i: Distribution of the LNG carrier fleet by build year and propulsion system



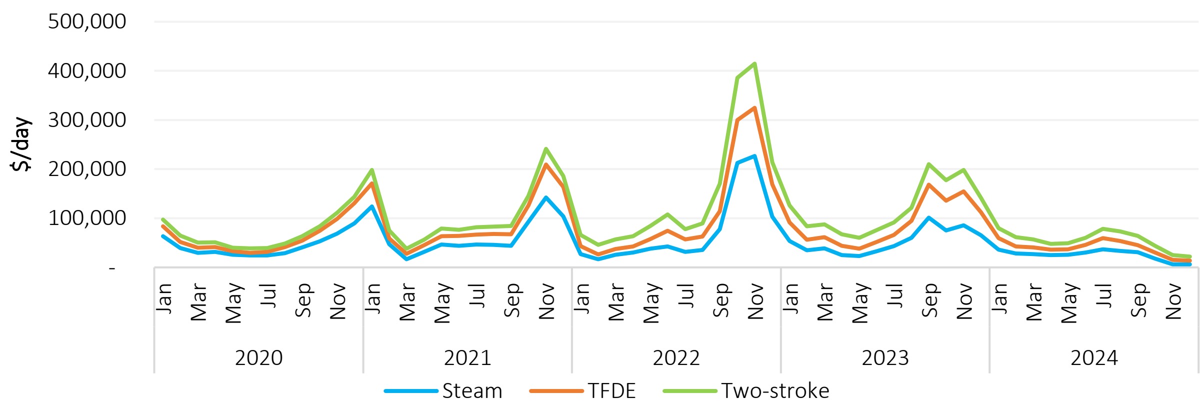
Source: GECF Secretariat based on data from ICIS

Spot charter rates for new two-stroke carriers are the highest, reflecting their substantial construction cost (exceeding $200 million per vessel), while the rates for old steam turbine carriers are the lowest. However, two-stroke carriers are increasingly preferred over other types of LNG carriers due to their superior fuel efficiency and larger cargo capacity, which result in reduced shipping unit costs driven by economies of scale. Furthermore, two-stroke carriers are better equipped to meet stringent maritime environmental regulations.

Spot charter rates are primarily influenced by the volume of spot LNG trade and the availability of LNG carriers in the spot market. These rates typically follow a seasonal trend, staying stable during periods of regular LNG demand but rising in the fourth quarter as Europe and Asia compete for cargoes ahead of the winter heating season. Notably, record highs were reached during the energy crisis of 2022.

In this context, the year 2024 proved to be exceptional for the LNG shipping market, as the average annual spot charter rate for steam turbine LNG carriers plummeted to a record low of $25,000/day, down from $43,000/day in 2020, $65,000/day in 2021, $72,000/day in 2022, and $53,000/day in 2023. This sharp decline was attributed to a sharp drop in spot charter rates in the fourth quarter, marking a notable deviation from the typical seasonal trend (Figure ii).

Figure ii: Monthly average spot charter rates for LNG carriers



Source: GECF Secretariat based on data from Argus

The interplay of several factors has led to a greater availability of LNG carriers in the spot charter market, exerting downward pressure on spot charter rates.

First, the LNG shipping market has experienced a record-breaking expansion of the carrier fleet, with the number of newly commissioned vessels reaching 70, surpassing the previous record of 54 carriers reached in 2021. The rate of new vessel additions has significantly outpaced the growth of global LNG export capacity in 2024.

Second, many of these newly commissioned LNG carriers were initially ordered for long-term charter contracts linked to upcoming liquefaction projects. However, due to the common practice of commissioning vessels before the commercial operations of LNG liquefaction plants commence, coupled with delays in the startup of some projects, many of these carriers have been temporarily redirected to the spot charter market.

Third, the decline in LNG cargoes used for floating storage contributed to the slump in spot charter rates in Q4 2024. Floating storage typically occurs around European ports in the fourth quarter, driven by a spot price contango. This happens when expectations of higher gas demand during the winter months prompt traders to store LNG on carriers near regasification terminals, aiming to capitalize on higher spot prices as the winter season progresses. Up to 20 carriers were estimated to be used for floating storage in Europe in Q4 2023. However, in Q4 2024, with minimal spot price contango and a year-on-year decline in LNG imports, floating storage in Europe was nearly non-existent.

Meanwhile, these atypical trends are unlikely to indicate a structural shift in the LNG shipping market, which is set to face new challenges ahead.

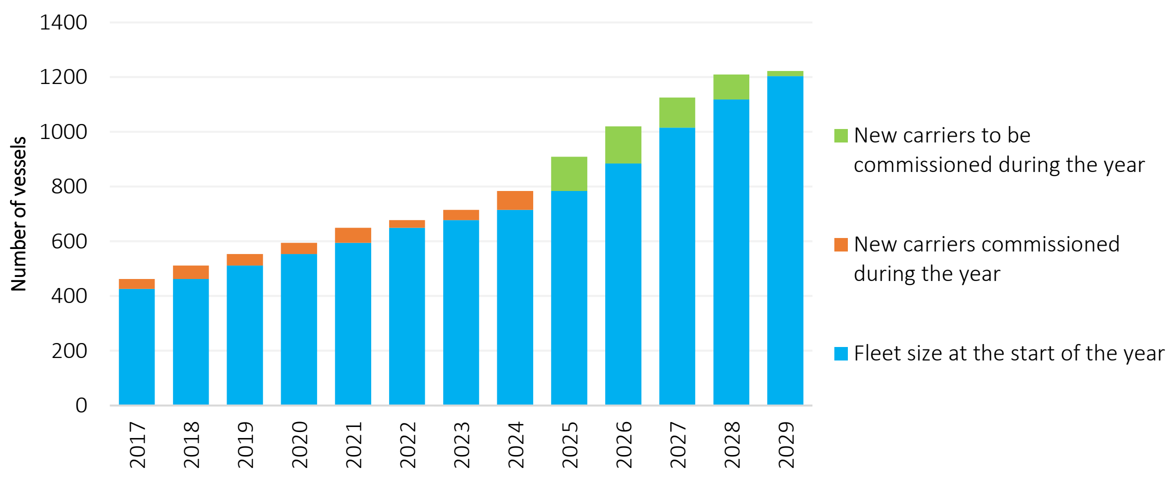
In the medium term, between 2025 and 2029, global LNG liquefaction capacity is expected to grow by 45%, from 500 Mtpa to 720 Mtpa. This significant increase in liquefaction capacity will necessitate a corresponding expansion of LNG shipping capacity to transport the additional volumes of LNG to the global market. Consequently, a key question arises regarding whether the LNG shipping industry will be able to effectively manage the challenges associated with accommodating this surge in LNG supply.

In this context, the year 2025 marks the beginning of a period during which approximately 500 new LNG carriers are expected to enter service by the end of the decade, representing an increase of over 50% in the total number of vessels compared to current levels (Figure iii). Notably, the next four years will set new annual records for the commissioning of LNG carriers.

The building of new LNG carriers is closely tied to the commissioning of new liquefaction plants, with market players placing vessel orders assigned to specific projects well in advance. LNG carrier construction is a highly specialized process, which requires a skilled and experienced workforce and typically takes between 18 to 24 months. South Korea, home to prominent shipyards such as Samsung Heavy Industries, Hyundai Heavy Industries and Hanwha Ocean, has historically been the global leader in LNG carrier construction. In the meantime, China has steadily gained ground in the market, offering additional shipyard capacity, improving quality and reducing costs. As a result, Chinese shipyards now account for a quarter of the LNG carrier orderbook through the end of the decade.

On the demand side, GECF member countries account for a substantial portion of the global LNG carrier orderbook. Notably, Qatar has placed orders for 128 new LNG carriers to support the North Field expansion and other projects. Russia and the UAE have also ordered new vessels to support the commissioning of LNG export projects in their respective countries. Additionally, other countries, such as Nigeria, have announced plans to modernize and expand their fleets.

Figure iii: Growth of the LNG carrier fleet



Source: GECF Secretariat based on data from ICIS

New LNG carriers feature significantly higher capacity than their older-generation counterparts, enhancing their ability to accommodate the growing LNG supply. For instance, Qatar's recent orders include over 20 carriers with capacity of 271,000 m^3 of LNG, surpassing the previous record for carrying capacity. Currently, global LNG shipping capacity (780 LNG carriers) stands at 127 million m^3, equivalent to 55 mt, serving 500 mtpa of liquefaction capacity. Between 2025 and 2029, LNG shipping capacity is expected to increase by 35 mt, while liquefaction capacity is projected to rise by 220 mtpa. As a result, the ratio of shipping capacity to liquefaction capacity will improve — each 1 mt of new shipping capacity will support 7 mtpa of liquefaction capacity in the new export projects, compared to 9 mtpa of liquefaction capacity today. This indicates that the LNG shipping industry is well positioned to handle the influx of new LNG supply.

Nevertheless, there are some factors, which may affect the medium-term development of the LNG shipping market, potentially limiting the growth of the global shipping capacity and leading to fluctuations in spot charter rates.

The number of operational LNG carriers will depend, to some extent, on the pace at which older steam turbine LNG carriers are retired, either through scrapping or conversion into Floating Storage Regasification Units (FSRUs) or Floating Liquefied Natural Gas (FLNG) units. Historically, the scrapping of older steam turbine vessels accounted for less than 1% of the fleet annually; however, this trend is expected to accelerate in the medium term due to the implementation of stricter maritime regulations aimed at enhancing operational efficiency and reducing greenhouse gas emissions. In the meantime, there are 48 FSRUs and 7 FLNGs currently in operation, and this number is anticipated to rise, particularly through conversion.

The availability of LNG shipping capacity is influenced by the voyage times of LNG carriers, which depend on the distances between LNG export and import terminals. Longer routes typically result in lower shipping capacity availability. With expected shifts in LNG trade routes — driven by the commissioning of numerous new liquefaction projects in the US (located far from key importing regions) and by increasing LNG import growth in East Asia — new LNG carriers are likely to undertake longer average voyage times. For instance, cargoes departing from the US Gulf Coast could take 50 days for a roundtrip to East Asia via the Panama Canal, compared to just 25 days for a roundtrip to Northern Europe or Brazil.

Voyage times may also be affected by developments related to transit through the Suez and Panama Canals. In 2024, traditional LNG shipping routes were partially disrupted. Geopolitical tensions in the Red Sea impacted LNG flows from the Middle East to Europe, resulting in rerouting around Africa via the Cape of Good Hope, which added up to 12 extra sailing days. Additionally, drought conditions in the Panama Canal reduced water levels and prompted transit restrictions, causing LNG cargoes from Trinidad and Tobago and the US Gulf Coast to East Asia to be rerouted around Africa, adding up to 14 extra sailing days.

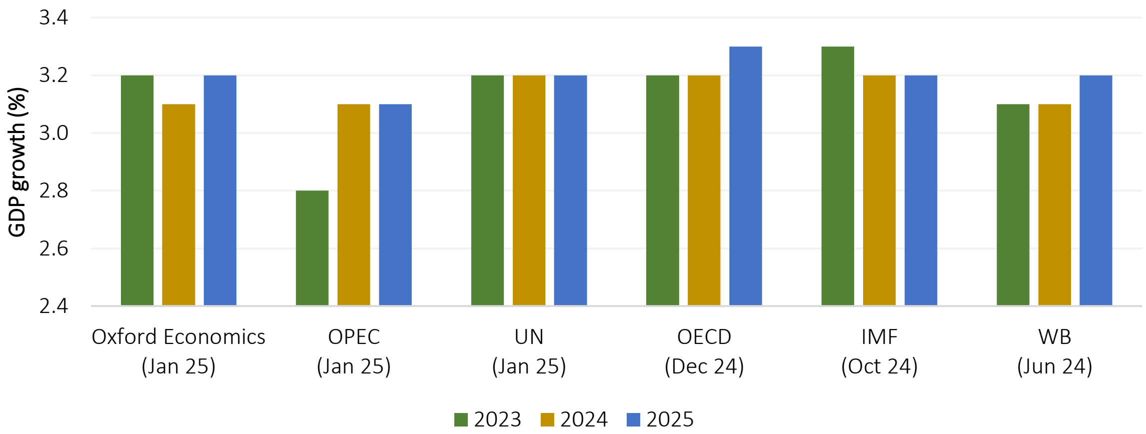
Ultimately, these developments highlight the anticipated ability of the LNG shipping industry to accommodate the growing global LNG supply from new liquefaction projects, with GECF member countries playing a crucial role in shaping these trends.

1 Global Perspectives

1.1 Global economy

As of January 2025, the global GDP growth for 2024 was estimated at 3.1% based on purchasing power parity, reflecting the resilience of the global economy amid ongoing challenges. This stability has been supported by easing inflationary pressures. The GDP growth forecast for 2025 remains unchanged at 3.2%, with growth expected to be steady but restrained due to persistent geopolitical tensions and uncertain trade policies (Figure 1).

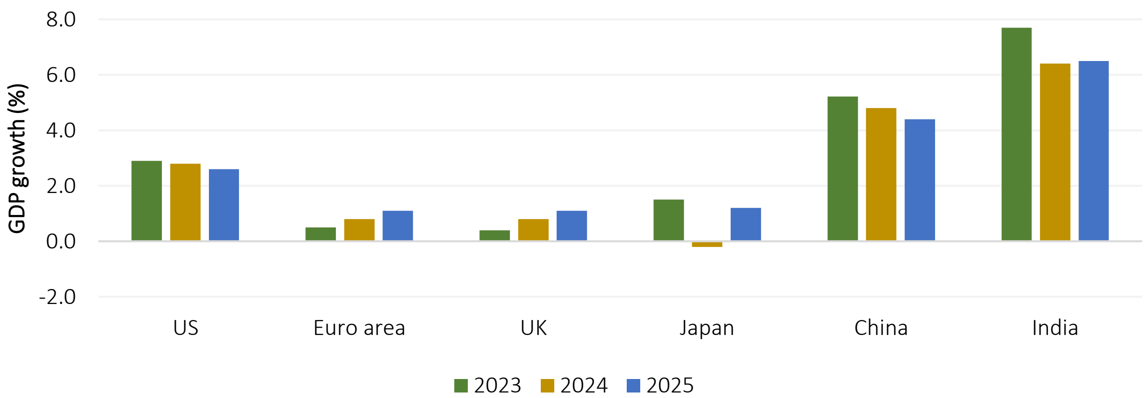
Figure 1: Global GDP growth



Source: GECF Secretariat based on data from Oxford Economics, OPEC, IMF, OECD, WB and UN
Note: Global GDP growth calculated based on purchasing power parity.

At a country level, the US GDP growth for 2024 was estimated at 2.8%, while the forecast for 2025 has been maintained at 2.6%; however, policy uncertainties under the Trump administration could create potential volatility. The Euro area's GDP growth for 2024 was estimated at 0.8%, while the forecast for 2025 was adjusted downward by 0.1 percentage points to 1.1%. China's GDP growth for 2024 was estimated at 4.8%, while the projection for 2025 remains at 4.4%; however, macroeconomic challenges and concerns about potential US tariffs persist. India's GDP growth for 2024 was estimated at 6.4%, while the projection for 2025 has been adjusted upward to 6.5% (Figure 2).

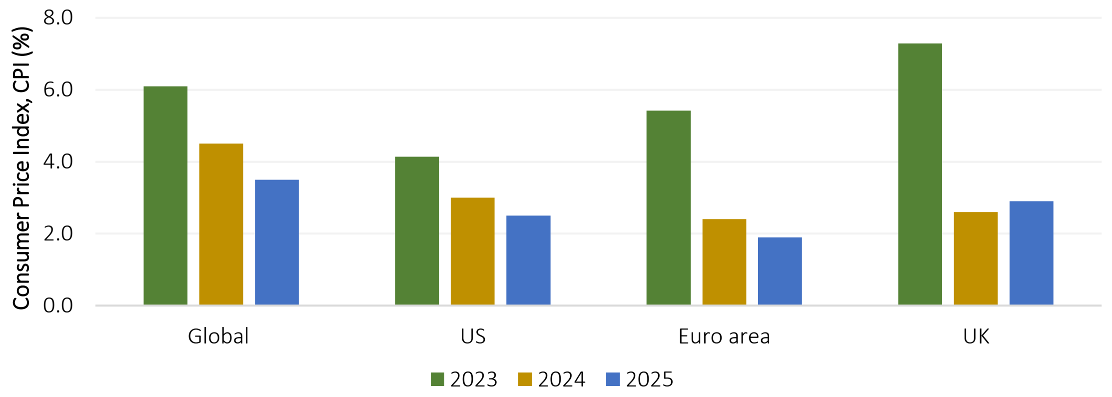
Figure 2: GDP growth in major economies



Source: GECF Secretariat based on data from Oxford Economics

Global inflation was estimated at 4.5% in 2024, declining from 6.1% in 2023, according to Oxford Economics. In 2025, global inflation is projected to fall further to 3.5%. In the Euro area, inflation was estimated at 2.4% in 2024 and is expected to decline to 1.9% in 2025. In the UK, inflation was estimated at 2.6% in 2024 and is forecast to increase to 2.9% in 2025. In the US, inflation was estimated at 3% in 2024 and is expected to fall to 2.5% in 2025 (Figure 3).

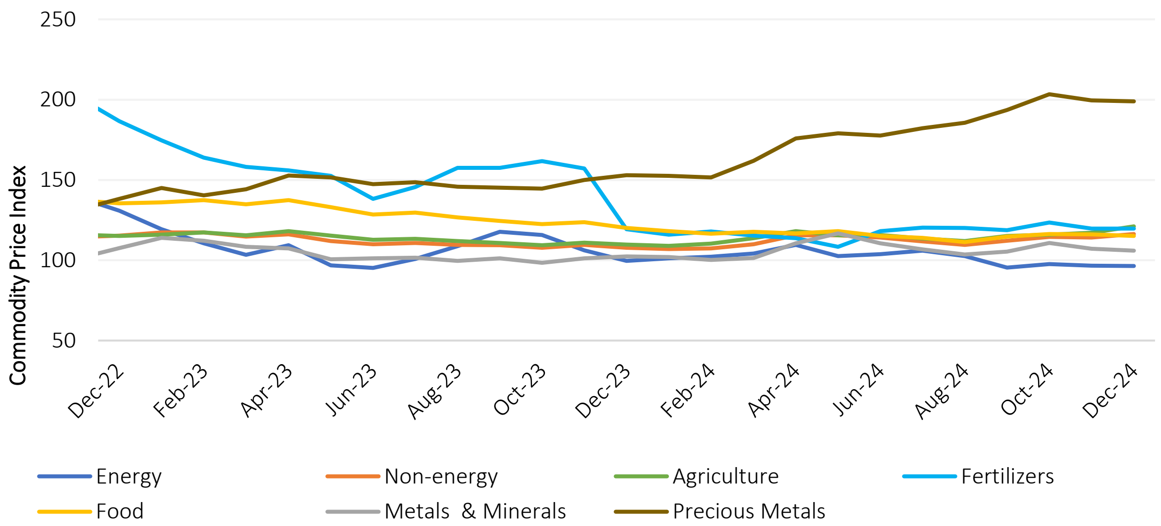
Figure 3: Inflation rates



Source: GECF Secretariat based on data from Oxford Economics

In December 2024, commodity prices in the energy sector remained at similar levels as the previous month, driven by stable oil and gas prices. However, the energy price index experienced a decrease of 3% y-o-y. In contrast, the non-energy price index experienced increases of 2% m-o-m and 8% y-o-y. Slight declines in metals and minerals price indices were offset by an increase in the agriculture price index. The fertilizer price index was relatively stable m-o-m and y-o-y (Figure 4).

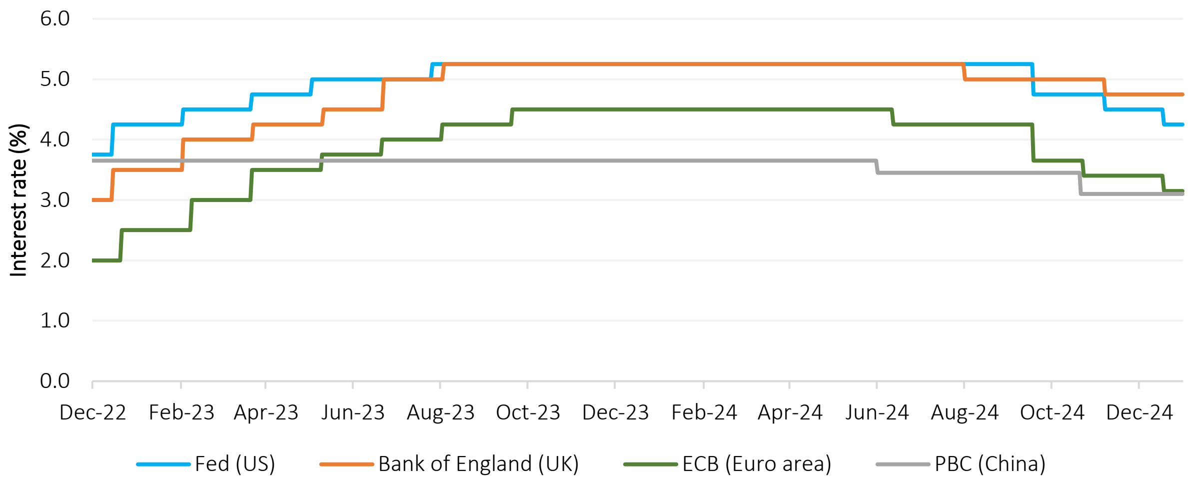
Figure 4: Monthly commodity price indices



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%).

On 18 December 2024, the US Federal Reserve (Fed) lowered its benchmark interest rate by 0.25 percentage points, bringing it within the range of 4.25% to 4.5%. Similarly, the European Central Bank (ECB) lowered its interest rates on 18 December 2024, bringing the main refinancing operations rate to 3.15%. Meanwhile, the Bank of England (BOE) maintained its benchmark interest rate at 4.75%. Additionally, the People's Bank of China (PBC) has also maintained its one-year Loan Prime Rate (LPR) at 3.1% (Figure 5).

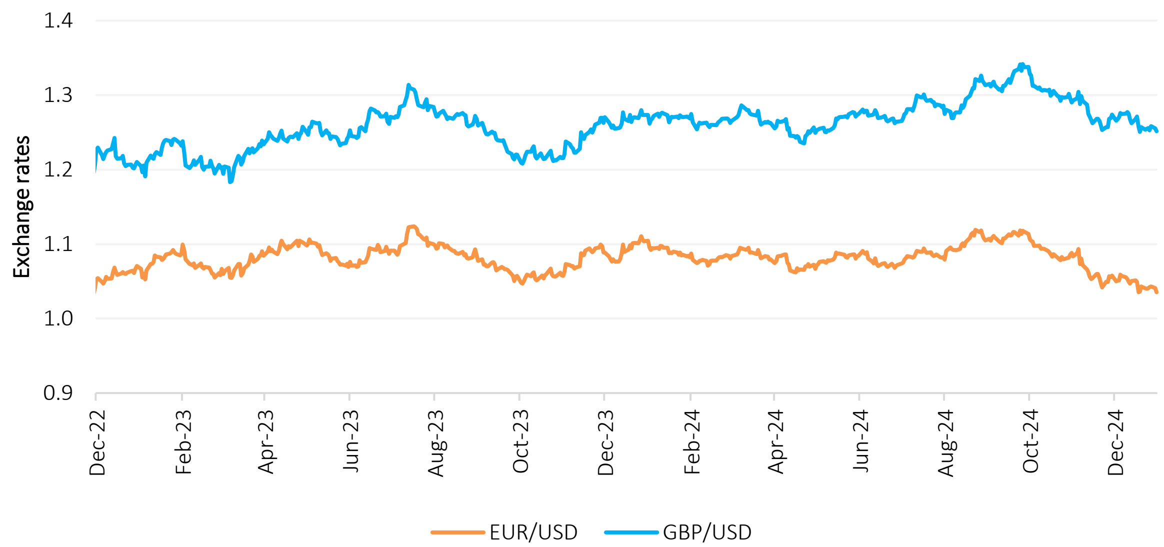
Figure 5: Interest rates in major central banks



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

In December 2024, the Euro depreciated against the US dollar, resulting in an average exchange rate of $1.0464, representing decreases of 2% m-o-m and 4% y-o-y. Similarly, the British pound depreciated against the US dollar, as the average exchange rate reached $1.2636, reflecting a decrease of 1% m-o-m and was at similar levels compared to the previous year (Figure 6).

Figure 6: Exchange rates



Source: GECF Secretariat based on data from Refinitiv Eikon

1.2 Other developments

Qatar: The 22nd Doha Forum took place on 7-8 December 2024 in Doha, Qatar under the theme "The Innovation Imperative." During the event, HE Saad bin Sherida Al Kaabi, Minister of State for Energy Affairs and the President and Chief Executive Officer of QatarEnergy, urged the European Union to "thoroughly" review the Corporate Sustainability Due Diligence Directive (CS3D). This directive mandates large companies to "identify and address" negative environmental impacts within their operations. He warned that the penalties, which could reach up to 5% of a company's total global revenue, might prompt businesses to reconsider investments within the EU. The CS3D is set to take effect on 26 July 2027, with a phased implementation over the subsequent 3–5 years. Additionally, Igor Sechin, Chief Executive Officer of Rosneft, also contributed to the forum with a presentation titled "The Economic Underpinnings of Conflicts." He underscored that renewable energy sources alone are insufficient to meet the increasing energy demands, driven by both developing economies and data centres, and emphasized the strategic role of fossil fuels in ensuring global energy security.

US: On 19 December 2024, the US announced a new Nationally Determined Contribution (NDC) under the Paris Agreement, setting an updated emissions reduction target of 61–66% by 2035 compared to 2005 levels for economy-wide net greenhouse gas emissions. This represents a significant increase from the previous target of a 50–52% reduction by 2030 from the same baseline. The revised NDC aligns with President Biden's goal of achieving a net-zero greenhouse gas economy by 2050. The US also expects to achieve a reduction in methane emissions of at least 35% by 2035 from 2005 levels as part of its efforts to meet the 2035 NDC emissions target.

Japan: The Japanese government plans to launch a mandatory emissions trading scheme, GX-ETS, during the fiscal year April 2026-March 2027, following the launch of a voluntary system in 2023. The GX-ETS will implement a cap-and-trade program, with the government distributing free allowances to eligible entities annually. The first allocation is expected to occur in the 2027–2028 fiscal year. Under the scheme, companies will be required to surrender allowances equivalent to their verified emissions for 2026–27 by the end of March 2028 and for 2027–28 by the end of March 2029. The trading platform for the GX-ETS will be managed and operated by the GX Acceleration Agency, established by the Japanese government in July 2024.

2 Gas Consumption

In the first eleven months of 2024, gas consumption in key consuming countries, which together account for 60% of global gas demand, rose by 2.8% y-o-y to reach 2,385 bcm, primarily driven by growth in Asia and North America.

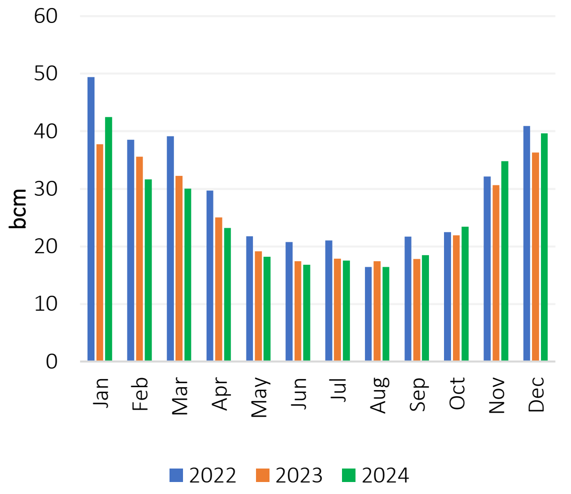
2.1 Europe

2.2.1 European Union

In December 2024, the EU gas consumption increased by 9.3% y-o-y to reach 40 bcm, representing the fourth consequent month of growth following a seven-month period of decline (Figure 7). The increase was driven by heightened demand in power and residential sectors. Reduced wind speeds and lower hydroelectric output prompted a significant reliance on gas-fired power plants to stabilize the electricity grid across the region, while colder-than-average weather further boosted residential and commercial gas use for heating. Similarly, industrial gas consumption continued to expand, supported by a recovery in key European economies and the benefit of lower gas prices.

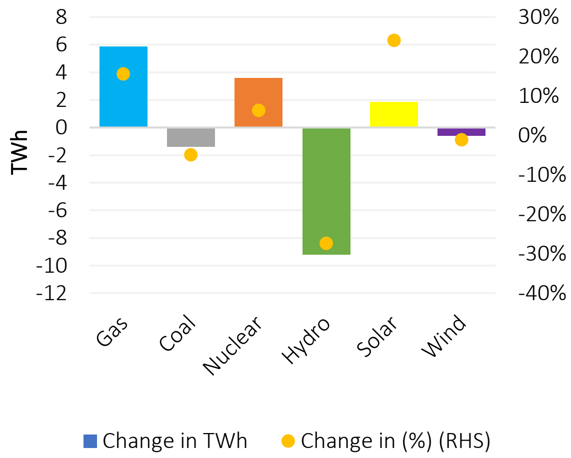
Total electricity production in the EU declined by 0.2% y-o-y to reach 228 TWh. Gas-fired electricity generation recorded a remarkable growth of 16% y-o-y, offsetting lower outputs from hydro and wind attributed to unfavourable weather conditions (Figure 8). In the power generation mix, non-hydro renewables led with a 32% share, followed by nuclear at 26%, gas at 19%, coal at 13% and hydro at 11%.

Figure 7: Gas consumption in the EU



Source: GECF Secretariat based on data from Entsog and Refinitiv

Figure 8: Trend in electricity production in the EU in December 2024 (y-o-y change)



Source: GECF Secretariat based on data from Ember

2.1.1.1 Germany

In December 2024, Germany saw its fourth consecutive month of growth in gas consumption, signalling a recovery trend in the German gas industry. Gas consumption rose by 7% y-o-y, reaching 10 bcm (Figure 9). This increase was primarily driven by higher demand in both the residential and industrial sectors. The residential sector recorded a 4% y-o-y increase due to colder temperatures, while the industrial sector witnessed a growth of 7% y-o-y (Figure 10).

Figure 9: Gas consumption in Germany

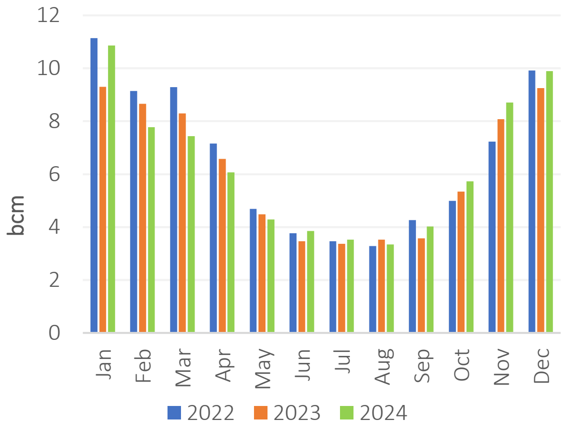
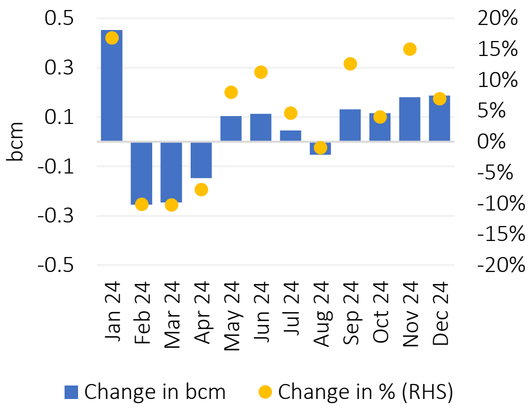


Figure 10: Trend in gas consumption in the industrial sector in Germany (y-o-y change)



Source: GECF Secretariat based on data from Refinitiv

Total electricity production declined by 12% y-o-y to reach 38.5 TWh. In addition, gas-fired power generation declined by 1% y-o-y, in line with the reduced outputs from wind, solar and hydro power due to unfavourable weather conditions (Figure 11). Notably, wind production recorded exceptionally low output levels with a decline of 15% y-o-y. In the electricity mix, non-hydro renewables led with a 52% share, followed by coal at 26% and gas at 19% (Figure 12).

Figure 11: Trend in electricity production in Germany in December 2024 (y-o-y change)

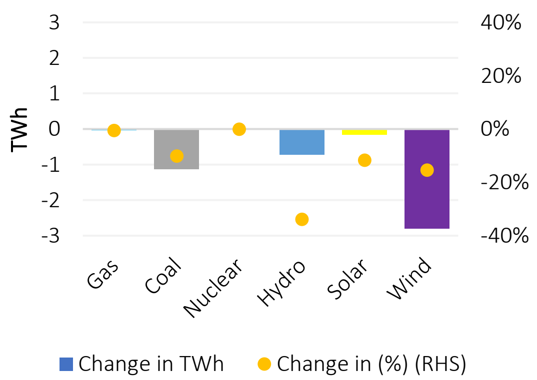
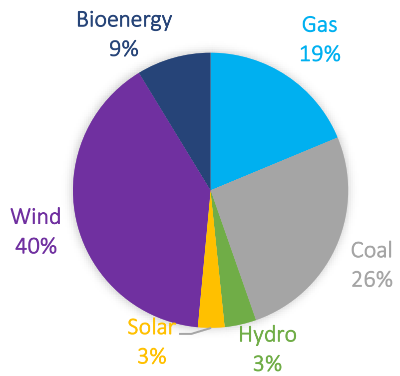


Figure 12: German electricity mix in Dec 2024



Source: GECF Secretariat based on data from Refinitiv and Ember

2.1.1.2 Italy

In December 2024, Italy's gas consumption saw a significant y-o-y increase of 8.6%, totalling 7.9 bcm (Figure 13). This growth was primarily driven by higher consumption in the power generation and residential sectors. The residential sector recorded a 10% y-o-y increase, reaching 4.6 bcm, largely due to colder-than-average temperatures, particularly in the northern regions of the country. Similarly, gas consumption in the industrial sector rose by 1% compared to the same period of the previous year, reaching 0.9 bcm (Figure 14).

Figure 13: Gas consumption in Italy

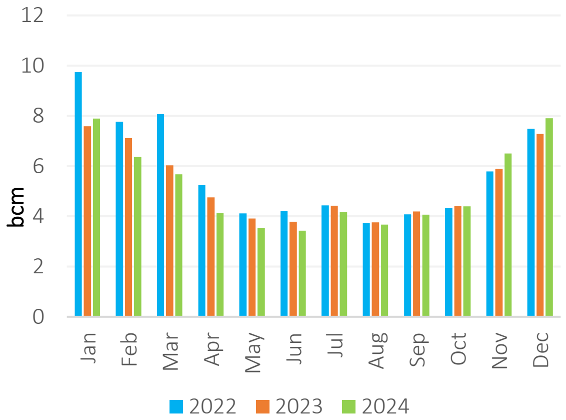
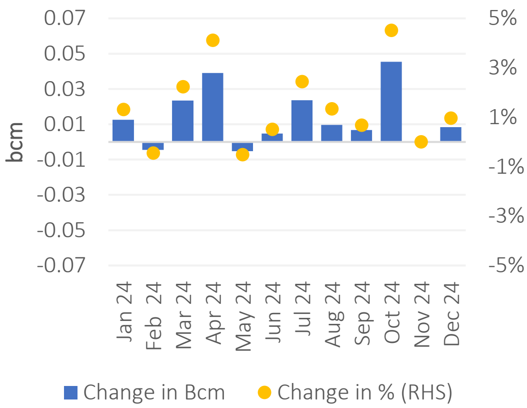


Figure 14: Trend in gas consumption in the industrial sector in Italy (y-o-y change)



Source: GECF Secretariat based on data from Snam

Total electricity production increased by 6.3% y-o-y to 19.4 TWh. Gas-based electricity production surged by 12% y-o-y to 2.1 bcm, to compensate significant y-o-y declines in electricity output from hydro (Figure 15). Meanwhile, gas remained the dominant fuel in the power mix with 58%, followed by non-hydro renewables with 29% (Figure 16).

Figure 15: Trend in electricity production in Italy in December 2024 (y-o-y change)

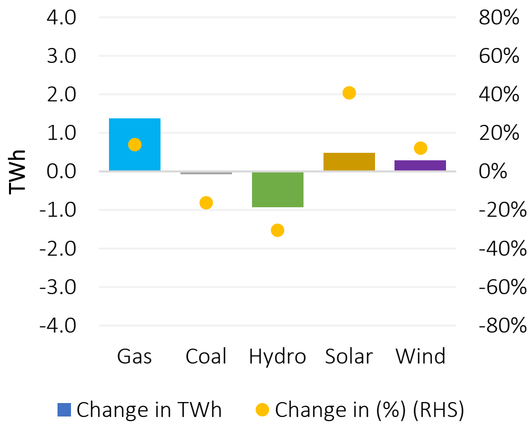
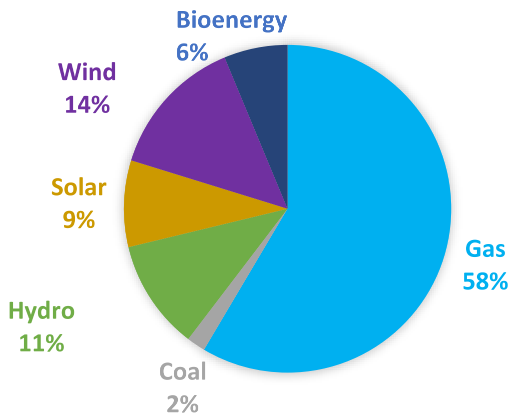


Figure 16: Italian electricity mix in December 2024

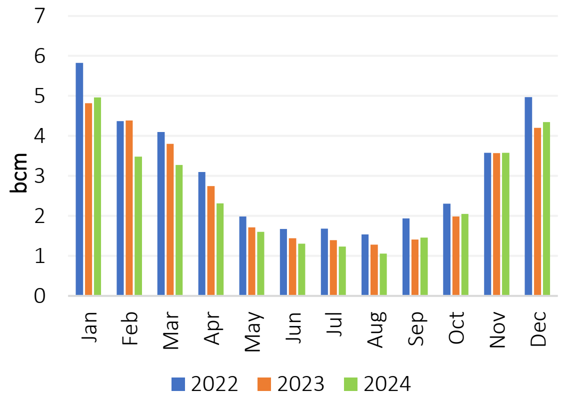


Source: GECF Secretariat based on data from Refinitiv and Ember

2.1.1.3 France

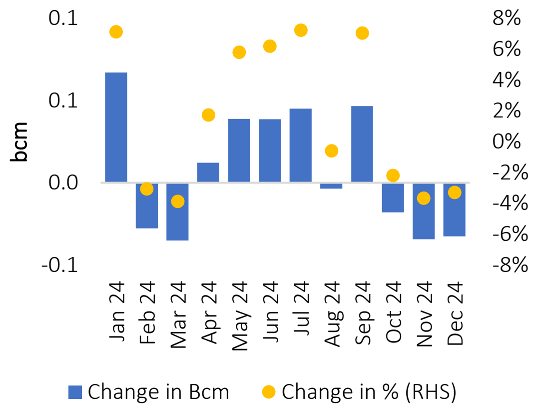
In December 2024, France's gas consumption increased by 3.5% y-o-y to reach 4.3 bcm (Figure 17). This increase reflected a growth in the residential sector of 7.7% y-o-y to reach 3 bcm driven by cold weather, offsetting a decline in the industrial and power generation sectors. The industrial sector saw a decline of 3.3% y-o-y, with consumption totalling 1 bcm (Figure 18).

Figure 17: Gas consumption in France



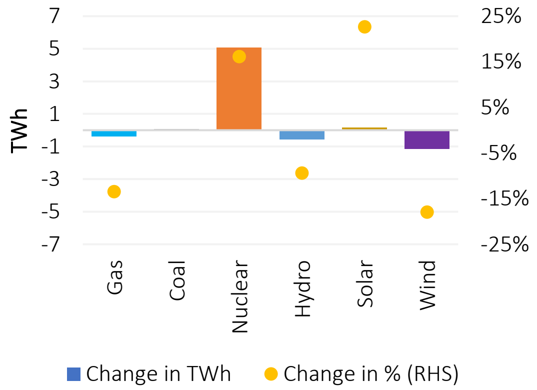
Source: GECF Secretariat based on data from GRTgaz

Figure 18: Trend in gas consumption in the industrial sector in France (y-o-y change)



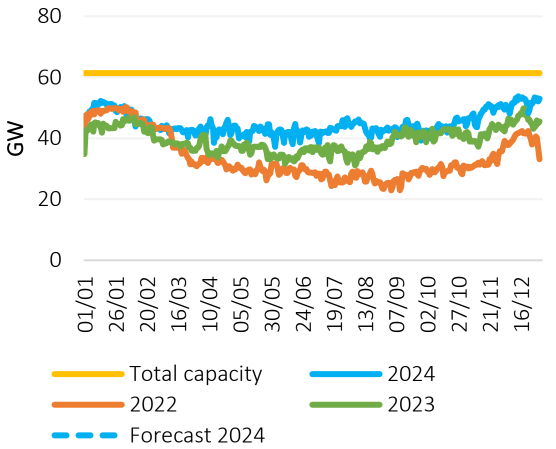
Total electricity production rose by 6.5% y-o-y to reach 51 TWh. Electricity production from gas declined by 13% y-o-y, while wind and hydro output also decreased by 18% and 9%, respectively. In the meantime, electricity production from solar and nuclear witnessed increases (Figure 19). The availability of nuclear capacity increased by 13% y-o-y and 11% m-o-m (Figure 20). In France's electricity mix, nuclear power continued to be the dominant source, accounting for a 71% share, followed by non-hydro renewables (13%), hydro (11%) and natural gas (5%).

Figure 19: Trend in electricity production in France in December 2024 (y-o-y change)



Source: GECF Secretariat based on data from Ember

Figure 20: French nuclear capacity availability



Source: GECF Secretariat based on Refinitiv and RTE

2.1.1.4 Spain

In December 2024, Spain's gas consumption rose by 16% y-o-y to 3.2 bcm, marking the second increase after nine consecutive months of declines (Figure 21). This growth was primarily driven by increased gas demand in the power generation sector, attributed to low renewable energy output. Meanwhile, the industrial sector experienced its sixth consecutive month of growth, with a 4% y-o-y increase, supported by higher gas usage across various industries, including construction, refineries, agro-food, metallurgy and pharmaceutical (Figure 22).

Figure 21: Gas consumption in Spain

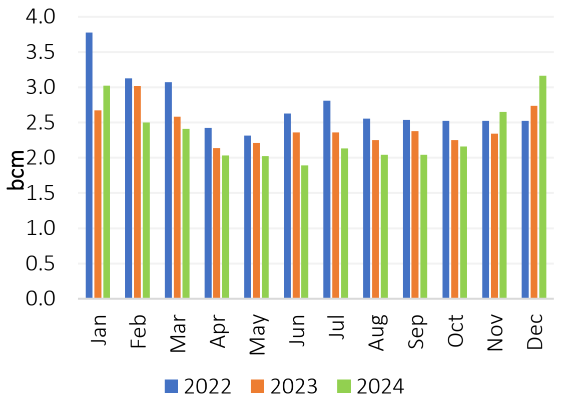
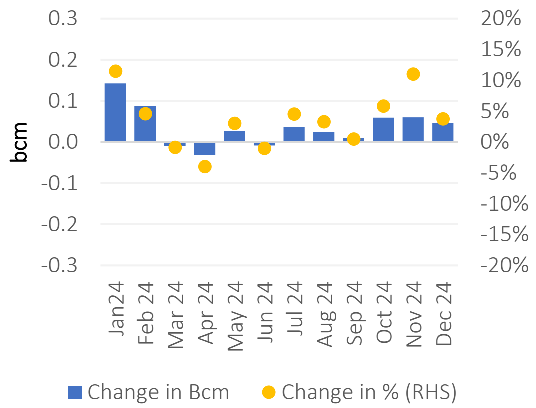


Figure 22: Trend in gas consumption in the industrial sector in Spain (y-o-y change)



Source: GECF Secretariat based on data from Enagas

Total electricity production in the country increased by 1.8% y-o-y to reach 21 TWh. Electricity generation from natural gas saw a 59% y-o-y increase, to compensate for a significant reduction in wind, hydro and nuclear output (Figure 23). The decrease in hydro output was driven by notably dry weather. Non-hydro renewables maintained the dominant position in the power mix, accounting for 40%, while natural gas represented 27% (Figure 24).

Figure 23: Trend in electricity production in Spain in December 2024 (y-o-y change)

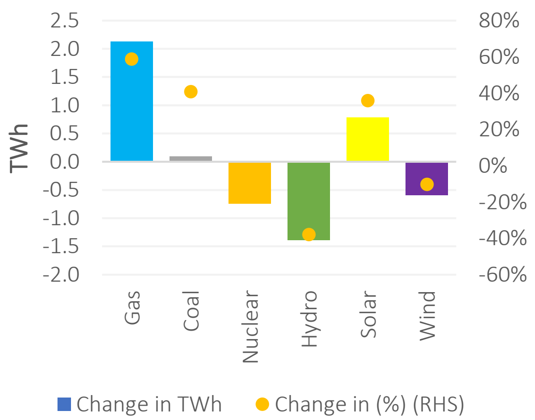
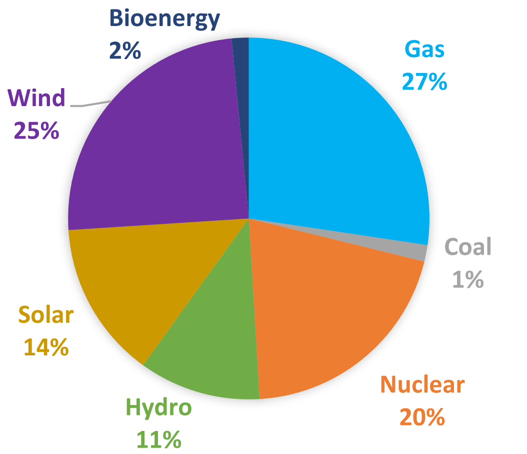


Figure 24: Spanish electricity mix in December 2024



Source: GECF Secretariat based on data from Ember and Ree

2.1.2 United Kingdom

In December 2024, the UK recorded its fourth consecutive monthly increase in gas consumption after seven months of decline, with consumption rising by 3.2% y-o-y to 6.8 bcm (Figure 25). The residential sector recorded a 2.3% y-o-y increase driven by higher heating demand due to a colder weather. The power generation sector saw a significant growth of 7% y-o-y, driven by the closure of the last coal-power plant in the UK and a reduction in nuclear output. In the power mix, non-hydro renewables led with a 54% share, followed by gas at 31% and nuclear at 13%. The industrial sector recorded a growth of 4% y-o-y, after fourth months of decline, to reach 0.2 bcm (Figure 26).

Figure 25: Gas consumption in the UK

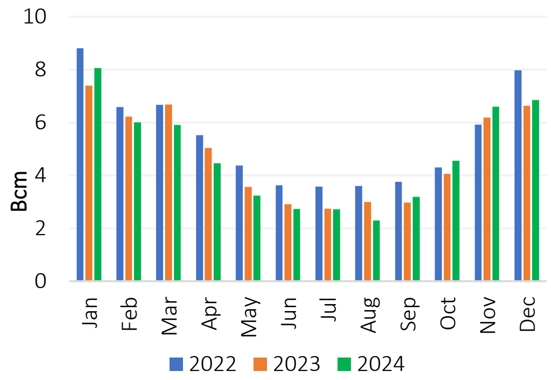
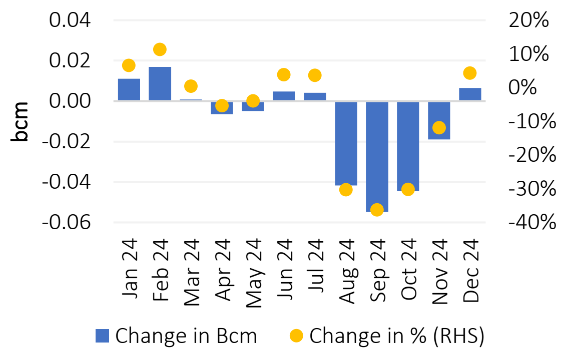


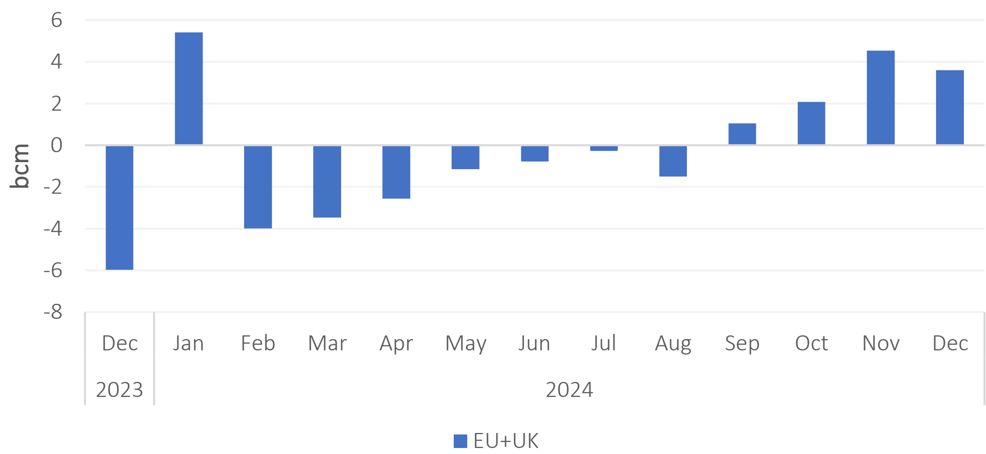
Figure 26: Trend in gas consumption in the industrial sector in the UK (y-o-y change)



Source: GECF Secretariat based on data from Refinitiv

The region (EU+UK) recorded its fourth consecutive month of recovery in gas consumption following seven months of y-o-y decline (Figure 27).

Figure 27: Y-o-y variation in EU and UK gas consumption



Source: GECF Secretariat based on data from Refinitiv

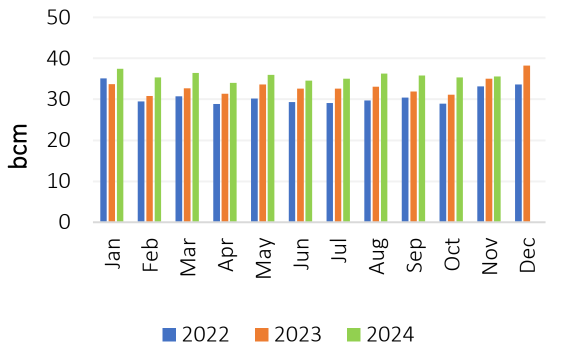
2.2 Asia

2.2.1 China

In November 2024, China's apparent gas demand rose by 1.7% y-o-y to 35.6 bcm (Figure 28). Gas-fired power generation increased by 2% y-o-y (Figure 29). Residential gas demand has risen consistently, supported by the extension of gas distribution systems and the wide adoption of home heating solutions, such as gas boilers, in southern China. The growing China's gas consumption will be supported by an uptick in LNG imports, which is projected to increase at an annual rate of 5% over the next decade compared to 20-25% annual growth in the past decade, according to BP's vice-president of global LNG trading, Jerome Milongo.

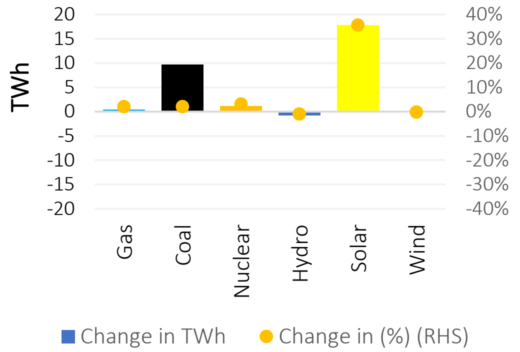
In the first 11 months of 2024, Chinese gas consumption increased by 9.3% y-o-y to 392 bcm.

Figure 28: Gas consumption in China



Source: GECF Secretariat based on data from Refinitiv

Figure 29: Y-o-y electricity variation in China



Source: GECF Secretariat based on data from Ember

2.2.2 India

In November 2024, India's gas consumption rose by 2.6% y-o-y to 5.8 bcm, marking its first recovery after three consecutive months of y-o-y decline (Figure 30). The growth was driven by higher gas consumption in the petrochemical and city gas sectors, with a rise of 61% (1.3 bcm) and 9% (1 bcm) y-o-y respectively. In the sectoral breakdown, the fertilizer sector accounted for 30% of gas demand, followed by city gas distribution (21%), power generation (9%), refining (8%) and the petrochemical sector (6%) (Figure 31).

In the first 11 months of 2024, India's gas consumption increased by 11% y-o-y to 66 bcm.

Figure 30: Gas consumption in India

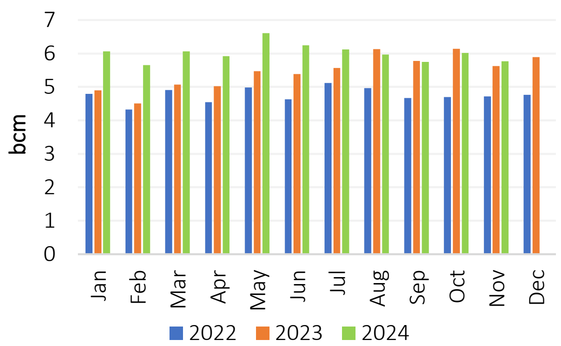
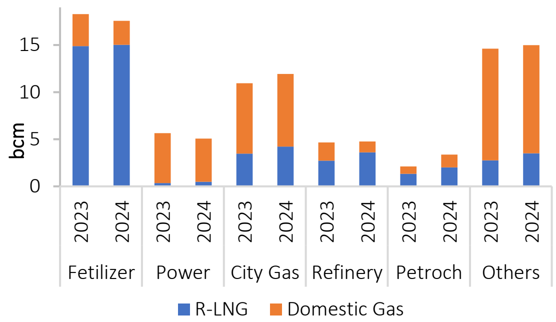


Figure 31: India's gas consumption by sector in November 2024

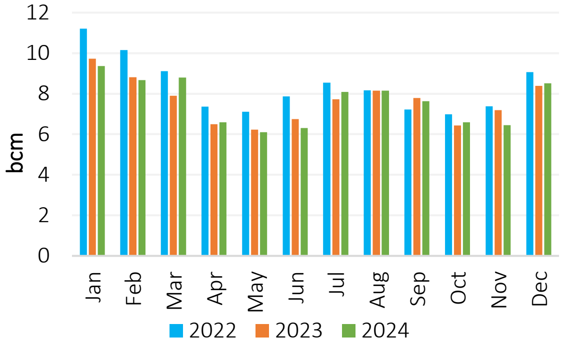


Source: GECF Secretariat based on data from PPAC

2.2.3 Japan

In December 2024, Japan's gas consumption increased by 1.5% y-o-y to 8.5 bcm (Figure 32Figure). Japan experienced its first colder-than-average month in two years, marking a significant change from the warmer weather patterns that had prevailed. This shift in temperatures has implications for gas consumption in the power generation sector (+4.8% y-o-y), as the country adapts to increased gas demand driven by the colder-than-expected conditions.

Figure 32: Gas consumption in Japan

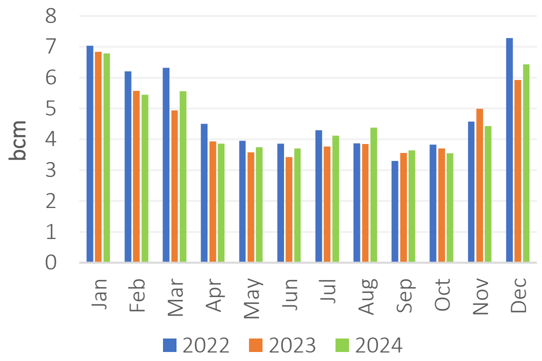


Source: GECF Secretariat based on data from Refinitiv

2.2.4 South Korea

In December 2024, South Korea's gas consumption increased by 8.5% y-o-y to 6.4 bcm (Figure 33), driven primarily by growth in the power generation sector, which saw an 8.4% rise compared to the previous year. This increase occurred despite warmer-than-usual weather conditions, highlighting the continued reliance on gas-fired power generation to meet the country's energy needs and support grid stability.

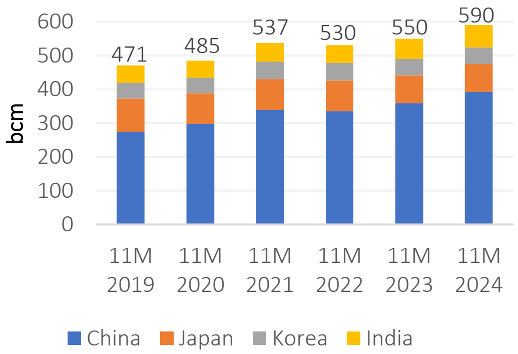
Figure 33: Gas consumption in South Korea



Source: GECF Secretariat based on data from Refinitiv

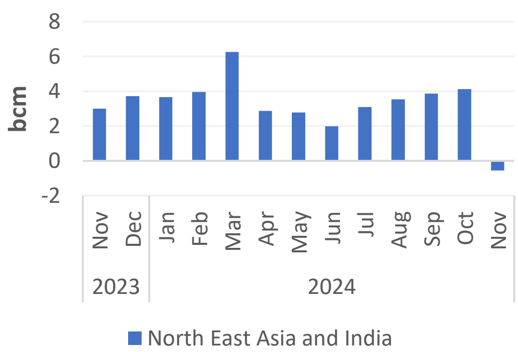
From January to November 2024, aggregated gas consumption in major Asian gas consuming countries, in particular China, India, Japan and South Korea, rose by 7% y-o-y (40.5 bcm) to reach 590 bcm (Figure 34). China was the leading contributor, with an additional 33 bcm, followed by India with an increase of 6.6 bcm. The region recorded the first decline after more than twelve consecutive months of y-o-y growth (Figure 35).

Figure 34: YTD aggregated gas consumption in major gas consuming countries in Asia



Source: GECF Secretariat based on data from PPCA, Refinitiv and Chinese custom

Figure 35: Y-o-y variation in major gas consuming countries in Asia

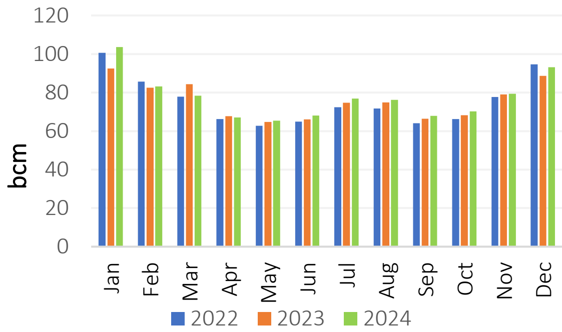


2.3 North America

2.3.1 US

In December 2024, US gas consumption increased by 5.1% y-o-y to 93 bcm (Figure 36). Gas-fired power generation witnessed a 3.7% y-o-y growth. The residential and commercial sectors rose 15% and 7.3% y-o-y, respectively driven by colder temperatures. However, the industrial sector declined by 0.3% because of the holiday period. In the power mix, gas continued to lead with a 41% share.

Figure 36: Gas consumption in the US

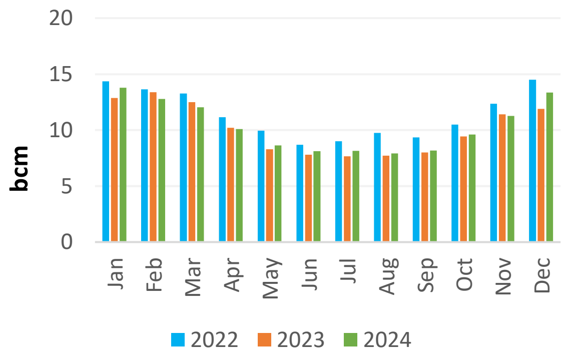


Source: GECF Secretariat based on data from EIA, Ember and Refinitiv

2.3.2 Canada

In December 2024, Canada's gas consumption increased by 2% y-o-y to reach 13 bcm (Figure 37). This growth was fuelled by significant increases across the residential, commercial, and industrial/power generation sectors, which registered y-o-y rises of 25%, 22%, and 6.4%, respectively. The surge in demand was largely attributed to colder-than-average weather, which boosted gas demand for heating purposes.

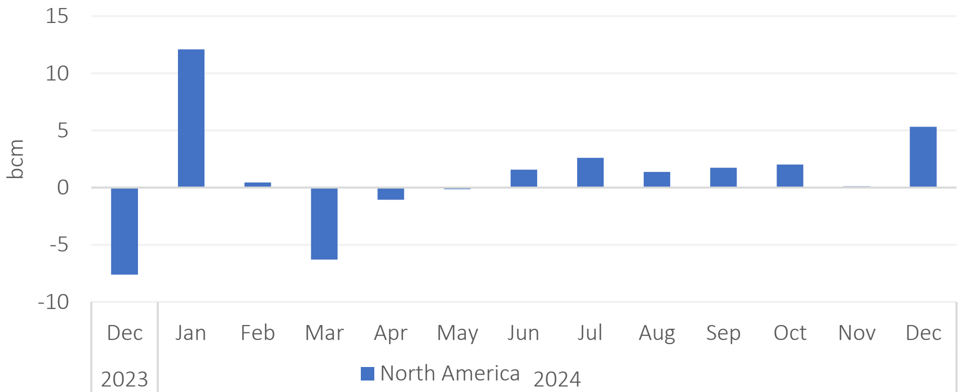
Figure 37: Gas consumption in Canada



Source: GECF Secretariat based on data from Refinitiv

The North American region recorded the seventh consecutive month of y-o-y growth (Figure 38). The US was the leading contributor with an additional 19 bcm, followed by Canada with an increase of 3 bcm. However, Mexico recorded a decline of 2 bcm.

Figure 38: Y-o-y variation in North American gas consumption



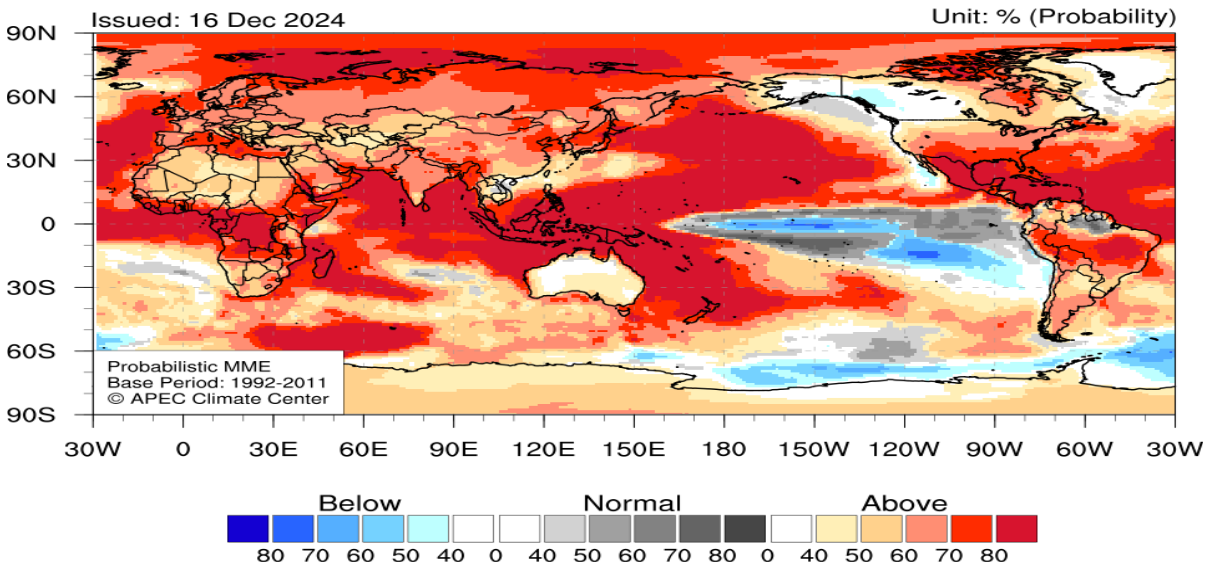
Source: GECF Secretariat based on data from EIA and Refinitiv

2.4 Other Developments

2.4.1 Weather forecast

According to the APEC Climate Centre, from January to March 2025, a pronounced likelihood of above normal temperatures (recorded during the period 1990-2020) is predicted for most of the globe, excluding the central and eastern tropical Pacific (Figure 39).

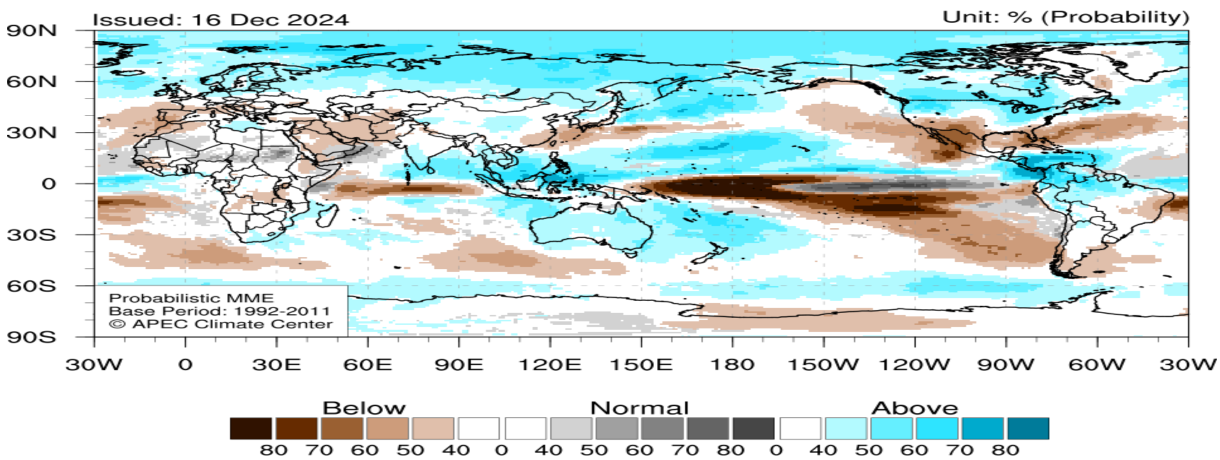
Figure 39: Temperature forecast January - March 2025



Source: APEC Climate Centre

According to the same source, above normal precipitation is predicted for the Arctic, northern North Pacific, central subtropical North Pacific, off-equatorial North Pacific, eastern Indian Ocean, the Caribbean Sea, Alaska, Canada, Southeast Asia and Australia. Strongly enhanced probability for below normal precipitation is predicted for the western equatorial Pacific, the eastern subtropical South Pacific, off-equatorial South Atlantic, the western Indian Ocean, Middle East, eastern subtropical North Pacific to Mexico and the western subtropical North Atlantic for the period January - March 2025 (Figure 40).

Figure 40: Precipitation forecast January - March 2025



Source: APEC Climate Centre

2.4.2 Sectoral developments

Maersk completed order of 20 LNG-fuelled vessels: Maersk has finalized agreements with three shipyards for the construction of 20 container vessels, each equipped with LNG dual-fuel propulsion systems, which vary in size from 9,000 to 17,000 TEU collectively offering a total capacity of 300,000 TEU. The vessels are part of the company's ongoing fleet renewal strategy and are aligned with its commitment to sustainability.

Oman plans 2.4 GW of new gas-fired power generation by 2029: Nama Power and Water Procurement (PWP), the single buyer of power and water for all independent power plants and independent water and power plants in the Sultanate of Oman, has initiated tendering process to build two new gas-fired power projects with a combined capacity of 2.4 GW. These projects, utilising combined cycle gas turbine (CCGT) technology, will be developed under a build, own and operate model to supply electricity to the main interconnected system grid.

Saudi Arabia awards power project contracts for 7.2 GW of gas-fired generation capacity: The Saudi Power Procurement Company has awarded contracts for 7.2 GW of combined cycle gas turbine (CCGT) power projects to two consortiums in Saudi Arabia. The first consortium, consisting of the Saudi Electricity Company (SEC), ACWA Power, and Korea Electric Power Corporation (KEPCO), has been awarded contracts for the Rumah I and Nairyah I gas-fired power plants, each with a capacity of 1.8 GW. The second consortium, made up of the UAE's Taqa, Japan's JERA, and the Saudi contractor Al Bawani, has secured contracts for the Rumah II and Nairyah II CCGT power plants, also with a capacity of 1.8 GW each.

South Korea commissioned a 1 GW gas-fired power plant: Tongyeong combined cycle gas turbine power plant has officially begun commercial operations in South Korea. Situated in Gyeongsangnam-do, the Tongyeong plant has a capacity of over 1 GW, sufficient to power around one million homes in the country. The LNG-powered facility is equipped with a 200,000-cbm LNG storage tank, supporting South Korea's broader strategy to shift from coal to liquefied natural gas.

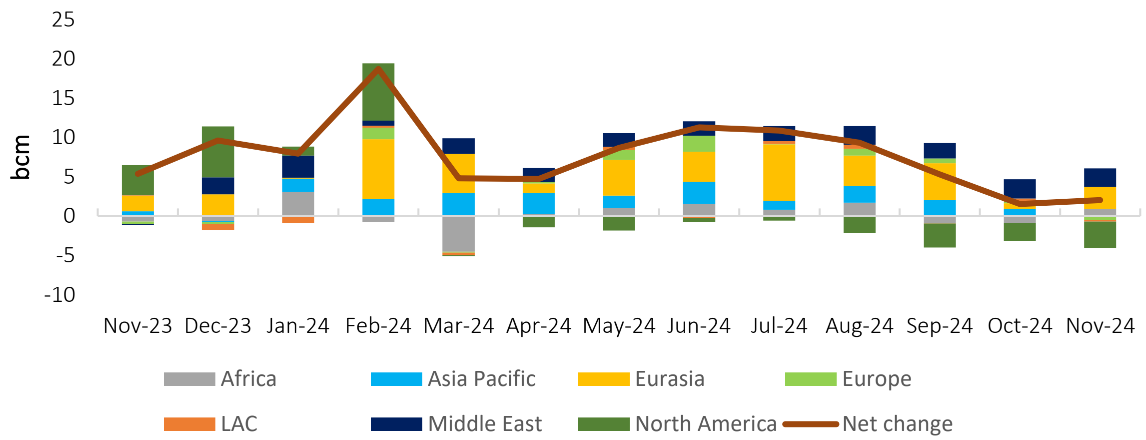
Malaysia launched its fourth methanol plant: The 1.75 mtpa Sarawak methanol complex in Bintulu, Sarawak, has officially started commercial operations. The plant is Malaysia's fourth methanol facility, raising the country's total methanol production capacity to 4.2 mtpa, the largest in Southeast Asia. Petronas, the Malaysian oil and gas company, is responsible for overseeing the plant's commercial operations. The complex is part of Malaysia's broader efforts to boost its industrial output and enhance its position as a key player in the global methanol market.

3 Gas Production

In November 2024, global gas production was estimated to have increased by 0.4% y-o-y to stand at the level of 352 bcm. Africa, Eurasia and the Middle East showed a positive production variation and counterbalanced the decline in other main gas producing regions, including North America, which witnessed the greatest decline, driven by lower gas output in the US (Figure 41).

From a regional perspective, North America maintained its leading position as the top-producing region, accounting for 30% of global gas production, followed by Eurasia with 21%, the Middle East with 18%, and Asia Pacific with 16%, while Africa, Europe, and Latin America and the Caribbean (LAC) held shares ranging from 4% to 6% (Figure 42).

Figure 41: Y-o-y variation in global gas production



Source: GECF Secretariat estimation

In the first eleven months of 2024, global gas production was estimated to have increased by 2.4% y-o-y to stand at 3,831 bcm (Figure 43). This growth was driven by an increase in Russia's production to meet rising domestic gas consumption and growing pipeline gas exports, along with the development of gas production in the Middle East. This was also accompanied by the growth in gas supply in Asia Pacific, specifically in China.

Figure 42: Regional gas production in Nov 2024

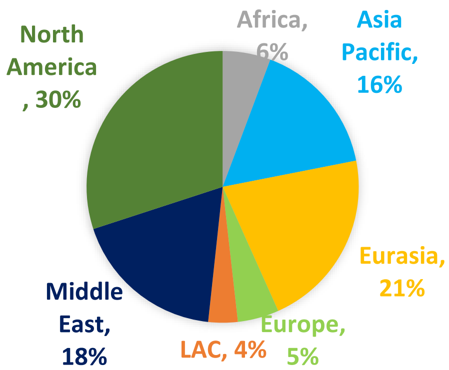
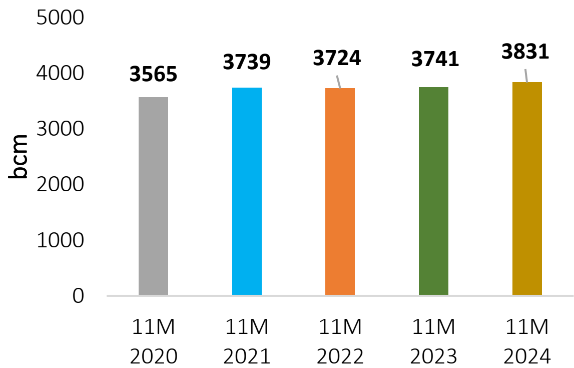


Figure 43: YTD global gas production



Source: GECF Secretariat estimation

3.1 Europe

In November 2024, European gas production recorded a 2.1% y-o-y decline, reaching a total output of 15.9 bcm (Figure 44). This decrease primarily originated from the reduced gas production in Norway, along with the continuous decline in UK's and the EU's output levels, mainly in the Netherlands and Germany. However, the magnitude of the production decline was limited by the rise in Türkiye's gas output, specifically with the production ramp up of the Sakarya gas field located in the Black Sea (Figure 45). Notably, total gas production in the EU stood at the level of 2.2 bcm, with the Netherlands and Romania being the top producers.

Figure 44: Europe's monthly gas production

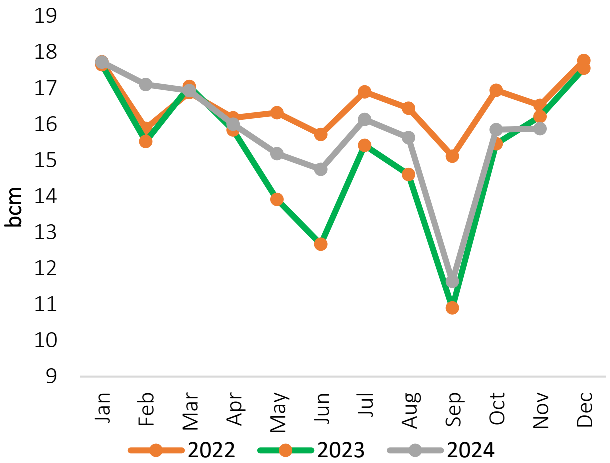
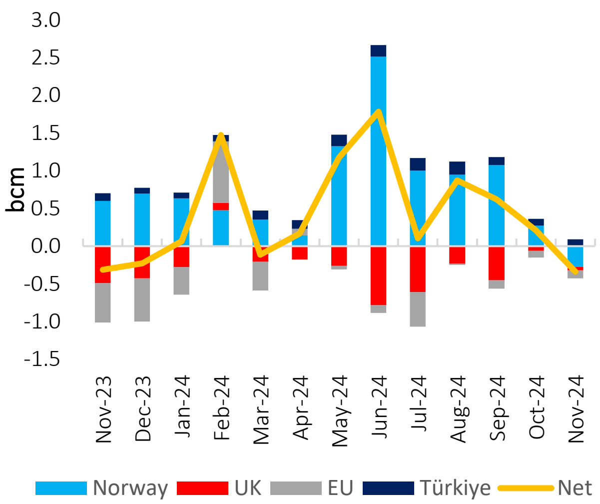


Figure 45: Y-o-y variation in Europe's gas production



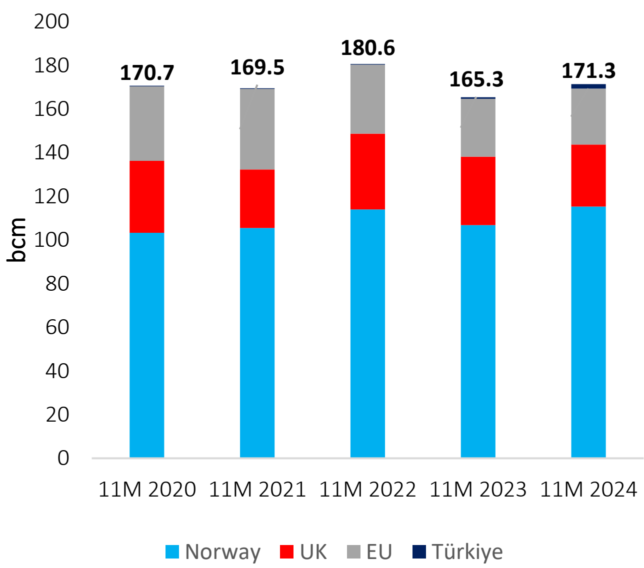
Source: GECF Secretariat based on data from Refinitiv, the Norwegian Offshore Directorate and JODI Gas
Note: EU countries include Austria, Denmark, Germany, Italy, Netherlands, Poland and Romania

From January to November 2024, the aggregated gas output in Europe stood at the level of 171.3 bcm (Figure 46), representing an uptick of 3.6%, when compared with the same period in 2023, and was also the second highest output in the last 5-year period, after 2022.

Norway was the main driver behind the increase in European gas production for this period, representing about 68% of the cumulative European production, with the Turkish gas output being the other important driver.

However, a continuous reduction in the gas outputs of historical European producers, including the UK and the Netherlands, was recorded.

Figure 46: YTD Europe's gas production



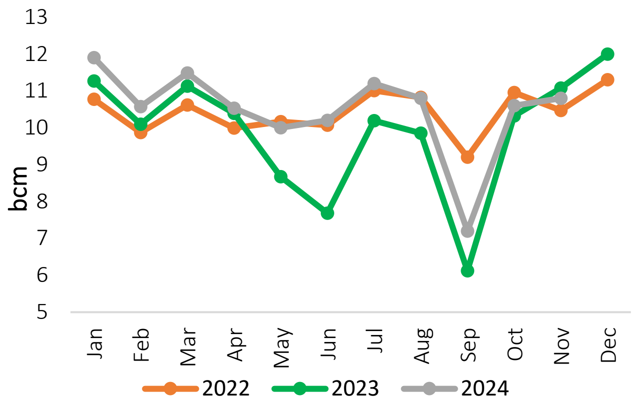
Source: GECF Secretariat based on data from Refinitiv, the Norwegian Offshore Directorate and JODI Gas

3.1.1 Norway

Norway's gas production witnessed a 2.5% y-o-y decline to reach the level of 10.8 bcm (Figure 47). This reduction was driven by a lower gas output from the giant Troll field, combined with the effect of longer-than-expected maintenance period. Notably, the 18 mcm/d Asgard gas field underwent an unplanned maintenance, which slashed its production by 8 mcm/d for 4 days, while the Sleipner field witnessed a planned maintenance outage that impacted its output by 9 mcm/d for 3 days.

In Jan-Nov 2024, cumulative gas production rose by 7.9% y-o-y to stand at 115.3 bcm.

Figure 47: Trend in gas production in Norway



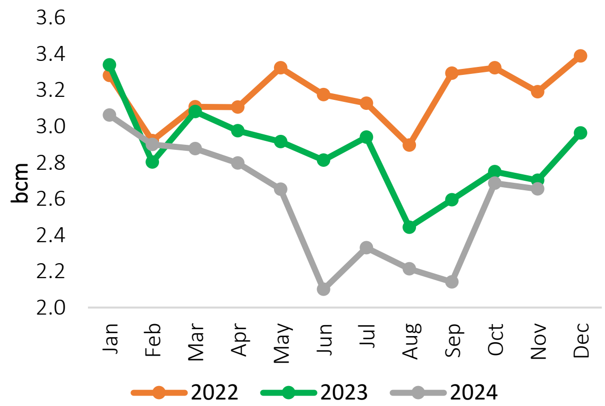
Source: GECF Secretariat based on data from the Norwegian Offshore Directorate

3.1.2 UK

The UK gas production continued its declining trend to stand at 2.66 bcm, representing a 1.7% y-o-y reduction (Figure 48). Planned maintenance of the 32.2 mcm/d Vesterled pipeline connected to Heimdal field reduced its production capacity by 11 mcm/d for periods of 3 days.

In Jan-Nov 2024, cumulative gas production stood at 28.5 bcm, representing a 9.4% y-o-y reduction, driven by the continuous decline in output from the mature UK fields and the lack of gas supplies from new fields.

Figure 48: Trend in gas production in the UK



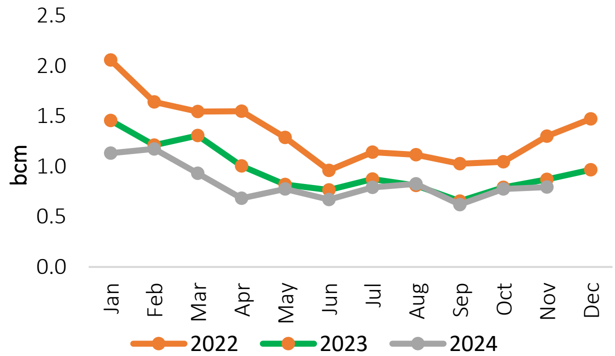
Source: GECF Secretariat based on data from Refinitiv

3.1.3 Netherlands

The Netherlands gas output saw an 8.7% y-o-y reduction to stand at the level of 0.79 bcm (Figure 49). All the 11 months in 2024 have recorded negative production variation, thus far, reflecting a declining outlook.

In Jan-Nov 2024, cumulative gas production decreased by 13% y-o-y to stand at 9.2 bcm. This production drop from the ageing Dutch fields is likely to continue in the coming years, with the reduction of gas share in the Dutch energy mix.

Figure 49: Trend in gas production in the Netherlands



Source: GECF Secretariat based on data from Refinitiv

3.2 Asia Pacific

In November 2024, gas output in Asia Pacific was estimated to stand at 57.2 bcm (0.2% y-o-y decline), with YTD gas production (Jan- November 2024) at the level of 639.2 bcm (3.2% y-o-y rise). This increase was driven by consistent growth in Chinese gas production.

3.2.1 China

In November 2024, China's gas production increased by 3.7% y-o-y to reach 20.7 bcm (Figure 50). Coal bed methane production slowed down its continuous growth to stand at a level of 1.3 bcm, with a 2% y-o-y rise. Notably, China's state-owned gas company Sinopec has announced an upward revised estimation for the proven reserves in Fuling shale gas field, to stand at the level of 1.1 tcm. In the first eleven months of 2024, China's annual gas production surged by 7.1% y-o-y to reach a record high of 224.7 bcm (Figure 51), with all months recording positive comparable changes. China is poised to be a major factor in the global gas supply growth in 2024.

Figure 50: Trend in gas production in China

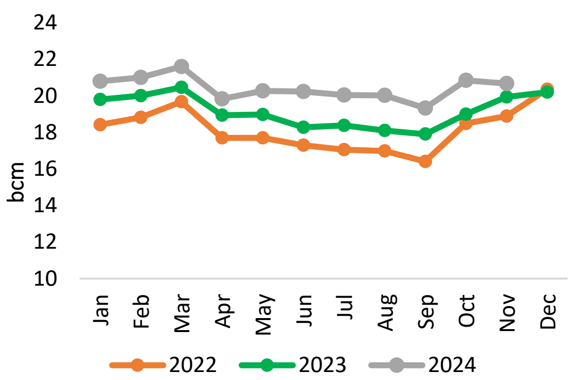
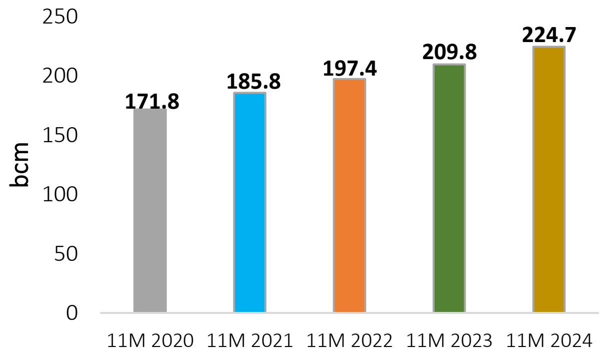


Figure 51: YTD China's gas production



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

3.2.2 India

In November 2024, India's gas production dropped by 1.9% y-o-y, marking the fifth consecutive month of decline, to stand at 2.95 bcm (Figure 52). The reduction was mainly driven by the decline of the offshore gas output, along with the decrease in the onshore Tripura field. However, this effect was partially counterbalanced by a rise in the Tamil Nadu gas field production, accompanied by the CBM gas fields, which recorded a 19% y-o-y uptick, mainly from the West Bengal field. In the first eleven months of 2024, cumulative gas production increased by 2.9% y-o-y to reach 32.9 bcm (Figure 53).

Figure 52: Trend in gas production in India

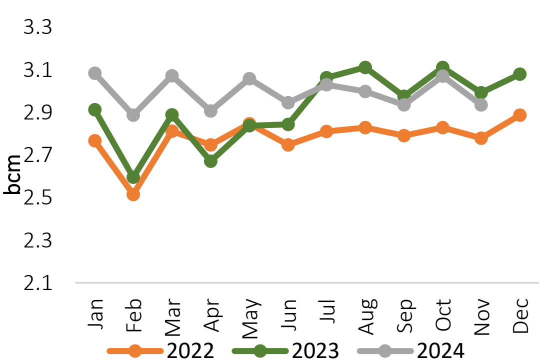
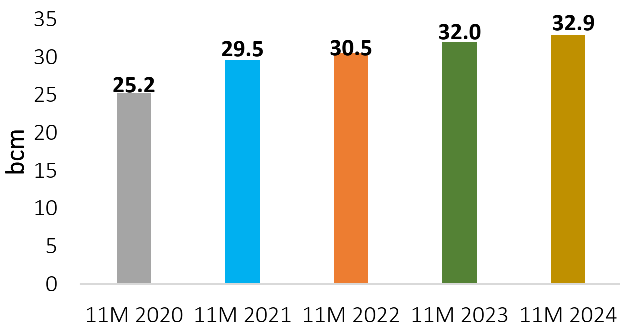


Figure 53: YTD India's gas production



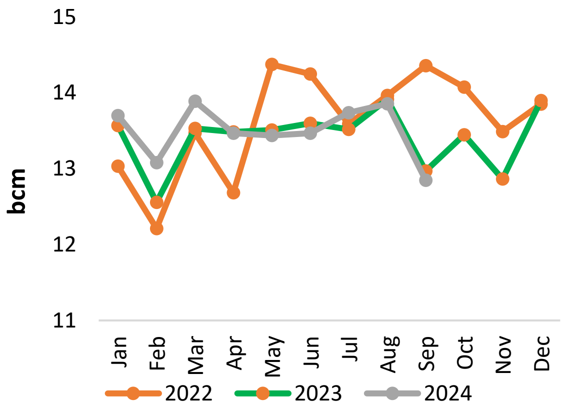
Source: GECF Secretariat based on data from the Ministry of Petroleum and Natural Gas (PPAC)

3.2.3 Australia

In October 2024, Australia's gas production witnessed an increase of 0.6% y-o-y to stand at 13.5 bcm (Figure 54). Gas production from CBM fields reached 3.5 bcm, representing a y-o-y rise of 0.8, and accounting for 26% of total domestic production. Australia kept the position of the leading CBM producer globally. Additionally, Australia announced that the country would provide no new direct public support for unabated fossil fuel projects, meeting a commitment it made during COP28.

In Jan-Oct 2024, cumulative gas output rose by 0.7% y-o-y to reach 135 bcm.

Figure 54: Trend in gas production in Australia



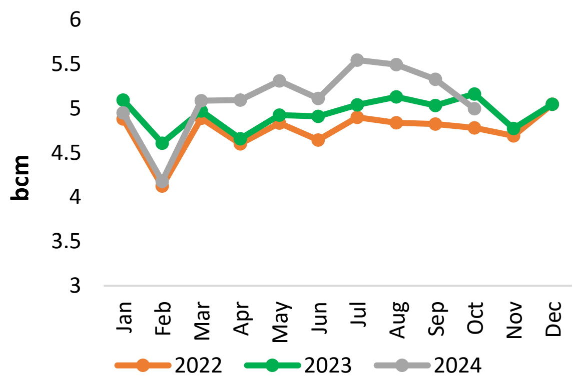
Source: GECF Secretariat based on data from the Australian Department of Energy

3.2.4 Indonesia

In October 2024, Indonesia's gas production witnessed a 3% y-o-y decline to reach 5 bcm. Although 94 new development wells have been drilled during the month, their aggregated production was not able to counterbalance the natural decline in the producing fields (Figure 55).

In Jan-Oct 2024, cumulative gas production increased by 3.2% y-o-y to stand at 51.1 bcm. This was driven by the startup of multiple gas projects, with 728 new development wells drilled in 2024 thus far, in addition to 31 new exploration wells.

Figure 55: Trend in gas production in Indonesia



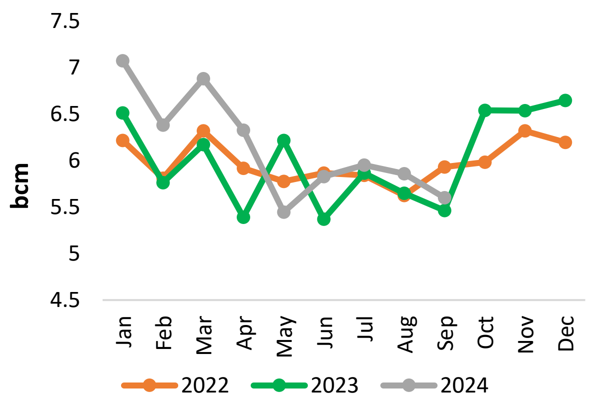
Source: GECF Secretariat based on data from Indonesia's upstream regulator (SKK Migas) and JODI Gas

3.2.5 Malaysia

In September 2024, Malaysia's gas production was estimated to stand at 5.6 bcm, representing a 3% y-o-y rise (Figure 56). Notably, Petronas, has announced the awarding of Production Sharing Contracts (PSCs) for three Discovered Resource Opportunities (DRO) Clusters and one exploration block offered under the Malaysia Bid Round (MBR) 2024, which was launched beginning of 2024.

In Jan-Sep 2024, cumulative gas production increased by 5.6% y-o-y to reach 55.3 bcm.

Figure 56: Trend in gas production in Malaysia



Source: GECF Secretariat based on data from the JODI Gas

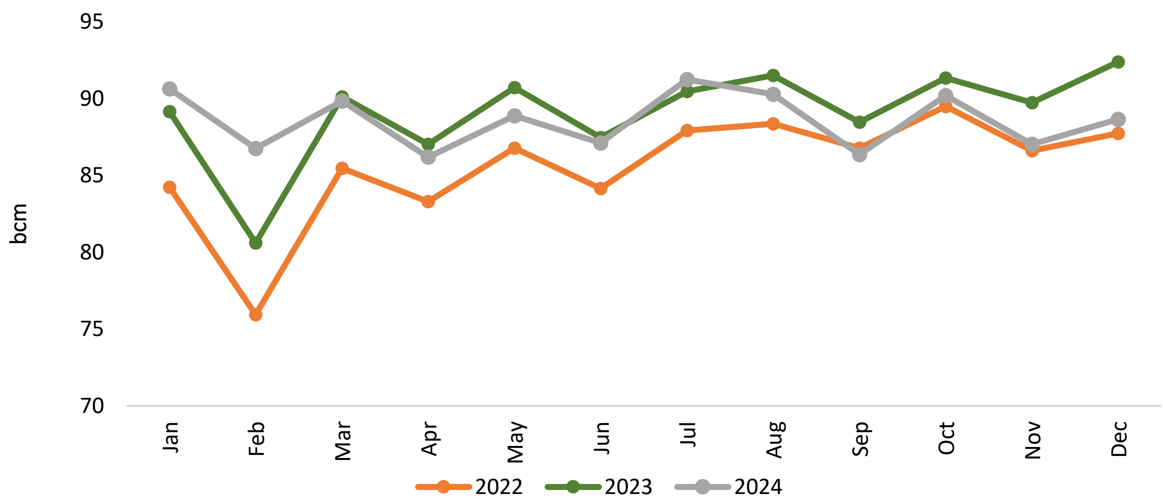
3.3 North America

In November 2024, gas production in North America (including Mexico) reached 106 bcm, representing a decline of 3% y-o-y, driven by the reduced gas output in both US and Canada. Furthermore, the North American YTD gas production (Jan-Nov 2024) was estimated to stand at the level of 1,182 bcm, which is 7 bcm lower than the level of this same period in 2023.

3.3.1 US

In December 2024, the US total gas production continued its downward trend with a 4.1 % y-o-y reduction, to total a monthly output of 88.6 bcm (Figure 57). This decrease reflected the combined effect of the end of Hurricane season, on Gulf of Mexico (GoM) gas production, and the production cuts by some major producers, in response to low Henry Hub gas prices. Eagle Ford's shale gas production region recorded the largest decline in the main producing regions, followed by the GoM. In terms of supply distribution, shale gas production accounted for 81% of total domestic output, while conventional gas represented the remaining 19%. In terms of field type, associated gas production represented 25% of total output. From a regional perspective, the Appalachian region accounted for 30.5% of total gas production, while the Permian region represented 23.5%.

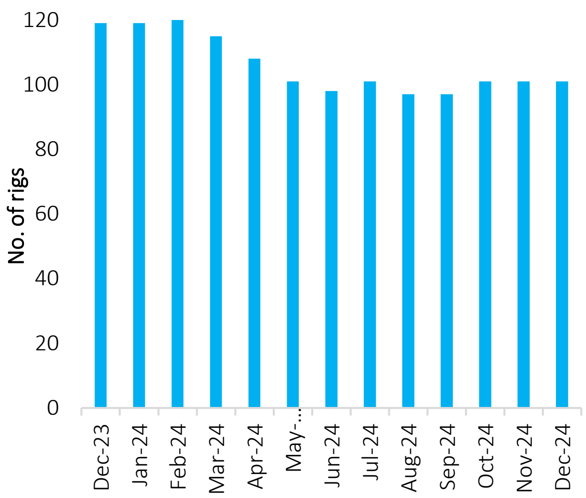
Figure 57: Trend in gas production in the US



Source: GECF Secretariat based on data from the US EIA

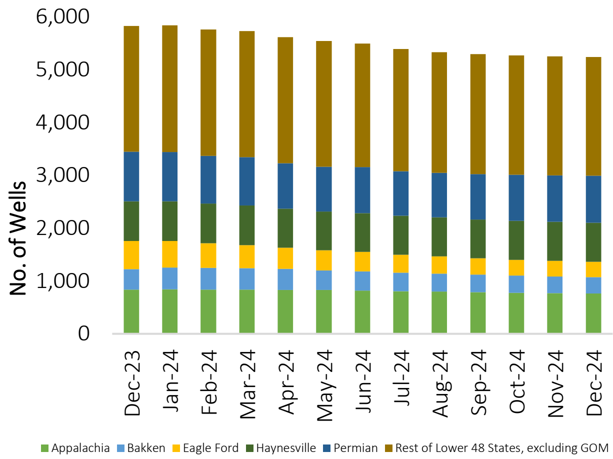
As of December 2024, the number of gas drilling rigs operating in the key shale gas regions and GoM stood at 101, mirroring the same level of both October and November 2024 (Figure 58). Permian basin accounted for the major share of the current drilling fleets with 53%, with a 1-well m-o-m rise, and 6 y-o-y decrease in the number of rigs (Figure 58). Additionally, in December 2024, the total number of drilled but uncompleted (DUC) wells in the seven major regions amounted to 5,238, marking a 12-well m-o-m decrease (Figure 59) and 587 well lower than December 2023. It is worth noting that this is the eleventh consecutive month to witness a decline in the number of DUCs since February 2024, driven by the low Henry Hub prices. Producers have been relying on their inventory of DUCs, in an attempt to reduce production cost and keep their shares in the market.

Figure 58: Gas rig count in the US



Source: GECF Secretariat based on data from Baker Hughes

Figure 59: DUC wells count in the US



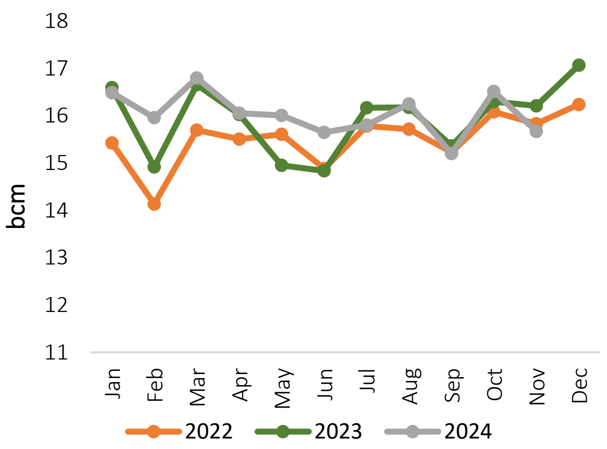
Source: GECF Secretariat based on data from the US EIA

3.3.2. Canada

In November 2024, Canada's gas production witnessed a 3.3% y-o-y decline in its output to stand at 15.7 bcm, (Figure 60), mainly driven by the reduction in the output from tight gas in British Columbia, accompanied by a slowdown in the gas drilling activity. From a regional perspective, Alberta was responsible for 9.8 bcm of the production, mainly originating from the rising Bakken shale output, while British Columbia accounted for 5.7 bcm, with tight gas production from Montney basin being the main source of this output.

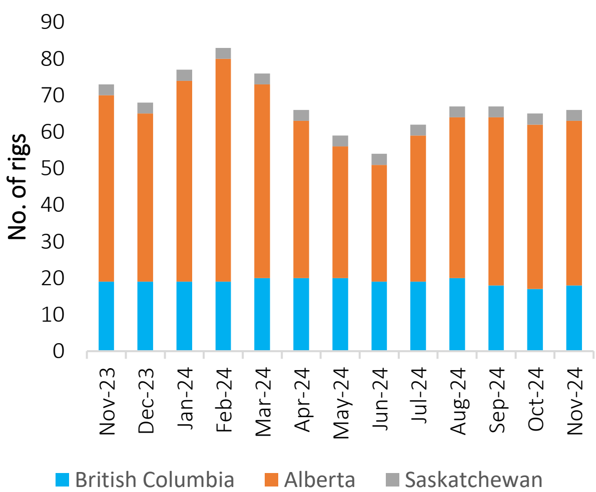
In the first eleven months of 2024, cumulative gas production in Canada totalled 176.4 bcm, representing a 1.3% y-o-y increase. With this level of output, Canada is projected to partially offset the decrease in the US gas production. In terms of gas drilling activity, November 2024 saw a monthly increase of 1 rig (in British Colombia), however this represented a y-o-y decrease of 7 rigs (Figure 61).

Figure 60: Trend in gas production in Canada



Source: GECF Secretariat based on data from CER, Alberta Energy Regulator and British Colombia Energy Regulator

Figure 61: Gas rig count in Canada



Source: GECF Secretariat based on data from Refinitiv

3.4 Latin America and the Caribbean (LAC)

In November 2024, gas production in LAC was estimated at 12.4 bcm (1.9% y-o-y decline), mainly driven by the decrease in Brazilian gas output. In addition, YTD gas production (Jan-November 2024) was estimated at 142.1 bcm, representing a 0.5% decline.

3.4.1 Brazil

In November 2024, Brazil's marketed gas production witnessed a 9.2% y-o-y decrease to stand at 1.52 bcm (Figure 62), driven by a 2.7% y-o-y decline in the gross gas production and an increase in both gas reinjection and flaring - 84% of production originated from offshore fields. In addition, production from pre-salt basins represented 76% of the total. In terms of distribution, 54% of gross production was reinjected into reservoirs, while gas flaring spiked with a 74% y-o-y increase, driven by the commissioning of the FPSO Marechal Duque de Caxias, in the Mero Field (Figure 63). For the period Jan-Nov 2024, cumulative Brazilian output reached 16.7 bcm, representing a 3.4% y-o-y decline, driven by higher gas reinjection volumes.

Figure 62: Trend in gas production in Brazil

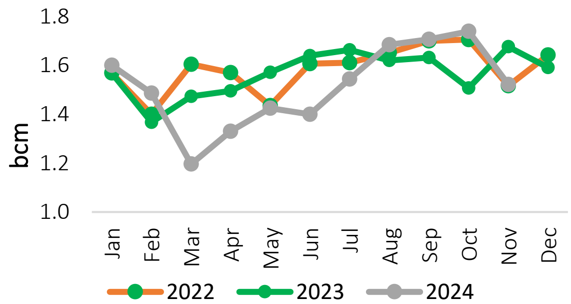
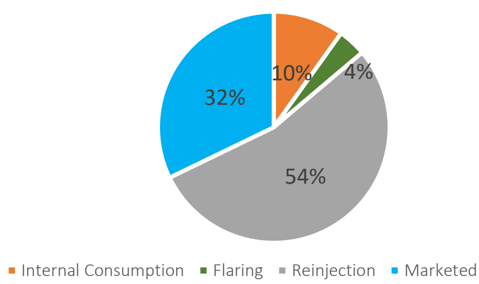


Figure 63: Distribution of gross gas production



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

3.4.2 Argentina

In November 2024, Argentina's gas production recorded its lowest monthly growth in 2024 to stand of 3.8 bcm, representing a 0.4% y-o-y rise (Figure 64). This was mainly driven by the slowdown in the rise of gas output from the Vaca Muerta shale gas basin. Shale gas production recorded an 8% y-o-y growth to reach the level of 1.9 bcm, accounting for 49% of total gas production (Figure 65). Moreover, tight gas reservoir production reached 0.43 bcm, to hold an 11% share of the total production. For the period Jan-Nov 2024, cumulative gas production stood at the level of 45 bcm, representing a 4.2% y-o-y increase.

Figure 64: Trend in gas production in Argentina

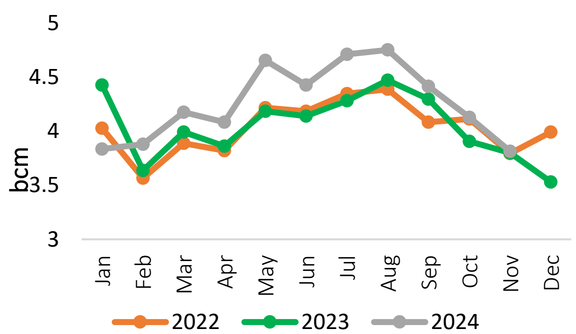
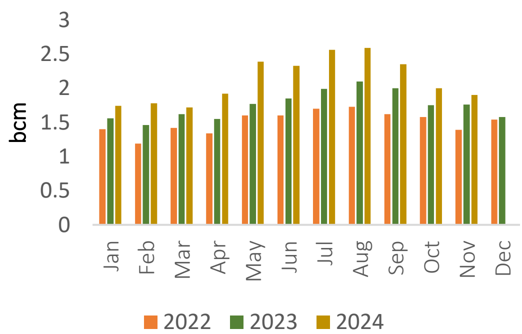


Figure 65: Shale gas output in Argentina



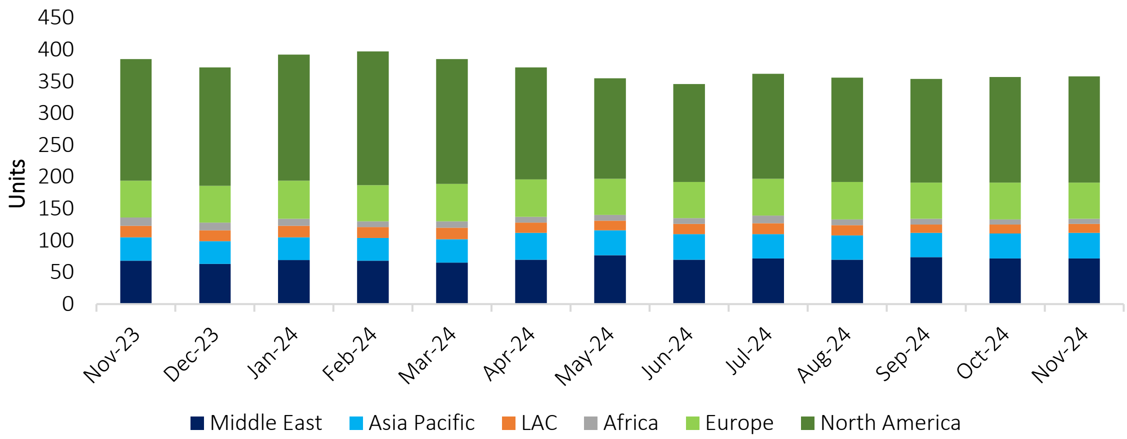
Source: GECF Secretariat based on data from Argentinian Ministry of Economy

3.5 Other developments

3.5.1 Upstream tracker

In November 2024, the global number of gas drilling rigs continued its rising trend for the second consecutive month, to increase by 1 unit m-o-m, reaching 358 rigs (Figure 66). This was mainly driven by the increase in the drilling activity in North America (Canada) and Asia Pacific (China), although this effect was partially counterbalanced by a slowdown of drilling activity in Europe, specifically in Türkiye, which released 1 gas drilling rig. Onshore drilling accounted for the majority with 326 units, while offshore accounted for 32 rigs.

Figure 66: Trend in monthly global gas rig count



Source: GECF Secretariat based on data from Baker Hughes
Note: Figure excludes Eurasia and Iran

In November 2024, the total volume of discovered gas and liquids amounted to 160 million barrels of oil equivalent (boe) (Figure 67). Natural gas dominated the new discoveries, accounting for 68% (19 bcm), while oil constituted 32% (50 million bbl). Eight new relatively small discoveries were announced, three of them were offshore. In terms of regional distribution, Eurasia dominated the new discovered volumes with 58%, mainly in Russia, followed by Europe with 33% (Figure 68). The Bolshoe Ilginskoye field, located in Irkutsk region, onshore Russia, was the most significant gas discovery, with a significant dry gas and condensate reserves. Cumulative discovered volumes for the period Jan-Nov 2024 amounted to 5.6 billion boe, with natural gas accounting for 44% (420 bcm).

Figure 67: Monthly oil and gas discovered volumes

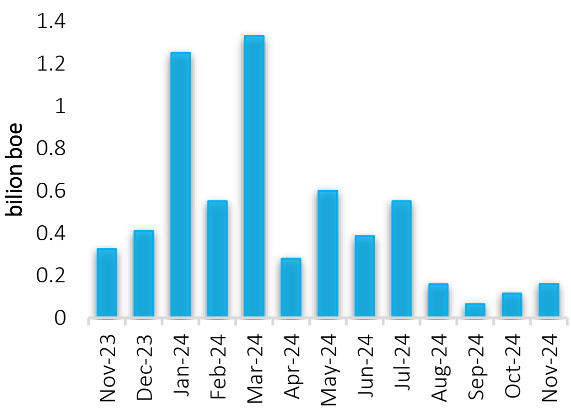
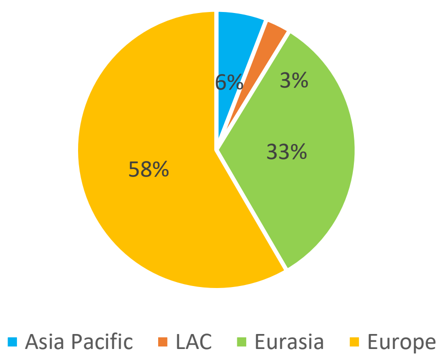


Figure 68: Discovered oil and gas volumes in November 2024 by region



Source: GECF Secretariat based on Rystad Energy

3.5.2 Other developments

Mauritania and Senegal announced the first gas production from their Greater Tortue Ahmeyim project: In December 2024, Mauritania and Senegal, along with their international partners Kosmos Energy and BP announced that the first gas production has been achieved at the offshore Greater Tortue Ahmeyim (GTA) liquefied natural gas (LNG) project. Gas from the first phase of GTA started to flow from wells to the floating production storage and offloading (FPSO) vessel ahead of delivery to the 2.7 Mtpa FLNG vessel for liquefaction. The first gas is considered a key milestone for Mauritania and Senegal and an important step for the countries to become a strategic LNG production hub in West Africa. First LNG production is expected to follow shortly with the first LNG cargo expected in the first quarter of 2025.

UAE's ADNOC Gas awarded 2.1 billion USD in contracts to enhance gas supply infrastructure: ADNOC Gas announced the awarding of three enabling contracts worth 2.1 billion USD for an LNG pre-conditioning plant (LPP), compression facilities and transmission pipelines to supply feedstock to the Ruwais LNG Project. The LPP and compression facilities will be located within ADNOC Gas' Habshan 5 plant, part of one of the world's largest integrated gas processing complexes. The newly awarded transmission pipelines will connect the Habshan Complex with the Ruwais LNG facility. When it becomes fully operational, the Ruwais LNG plant will more than double ADNOC Gas' current LNG production capacity to more than 15 Mtpa.

126 billion USD to be invested in floating production units to 2030: According to a recent study by Energy Maritime Associates (EMA), nearly 120 floating production systems could be ordered over the next five years, with more than 70% of the projected investments directed to 54 floating production, storage and offloading units (FPSOs). Brazil is projected to remain the largest FPSO market, with its share of the FPSO fleet culminating more than Africa and the rest of South America combined. For drilling, EMA report concluded that semisubmersible rigs would remain the most cost-effective option for deep-water developments in the Gulf of Mexico and China. On the other hand, the challenge of finding the finance for building floating production units would be the most crucial constraint for the expansion.

Europe's first full-scale CCS facility reached the FID stage: The UK company INEOS took FID on the first commercial phase of Project Greensand – Europe's first full-scale CCS facility, with an estimated investment of 150 million USD. In Phase-1, the carbon dioxide will be captured and liquefied at Danish biomethane production plants, transported to the port of Esbjerg, and then shipped to the Nini field in the Danish North Sea for permanent storage. Storage operations are scheduled to begin at the end of 2025, with an estimated annual capacity of 0.4 Mtpa of CO_2. Later phases of the project are expected to increase the CCS potential up to 8 Mtpa of CO_2.

4 Gas Trade

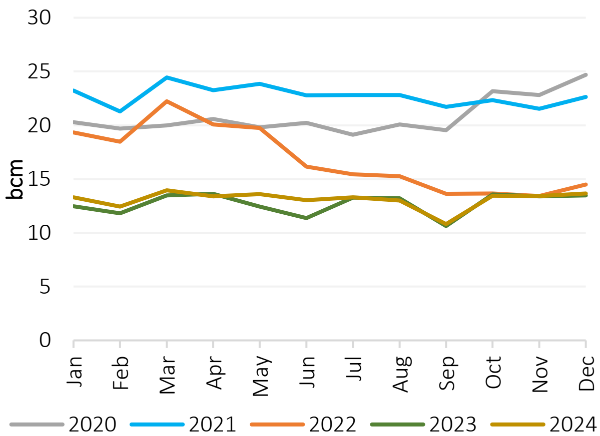
4.1 PNG trade

In December 2024, there was an estimated 3% y-o-y decrease in the total global PNG exports, despite an estimated increase of 2% from the level of the previous month.

4.1.1 Europe

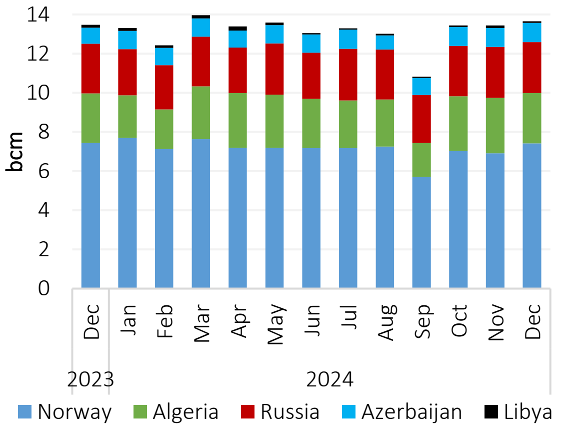
There was a very slight uptick in the volume of PNG imported by the EU countries in the final month of 2024, highlighting the stable level of PNG supply to the region over the year. There were 13.7 bcm of PNG imported in December 2024, which was 1% higher y-o-y, and 2% greater than the level imported in the previous month (Figure 69). PNG imports during the month were boosted by increased supply from Norway and Azerbaijan, while flows from Russia were almost unchanged m-o-m (Figure 70).

Figure 69: Monthly PNG imports to the EU



Source: GECF Secretariat based on data from Refinitiv

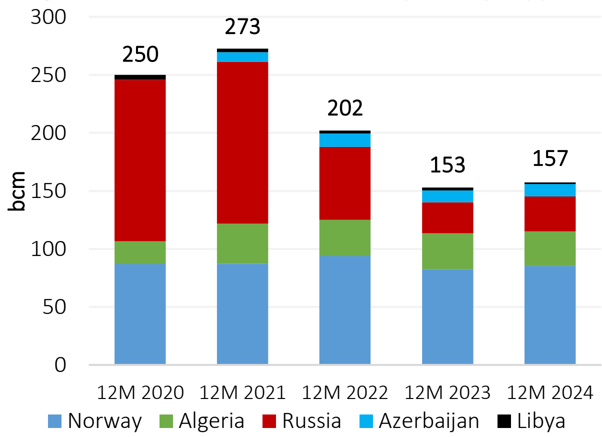
Figure 70: Monthly EU PNG imports by supplier



Source: GECF Secretariat based on data from Refinitiv

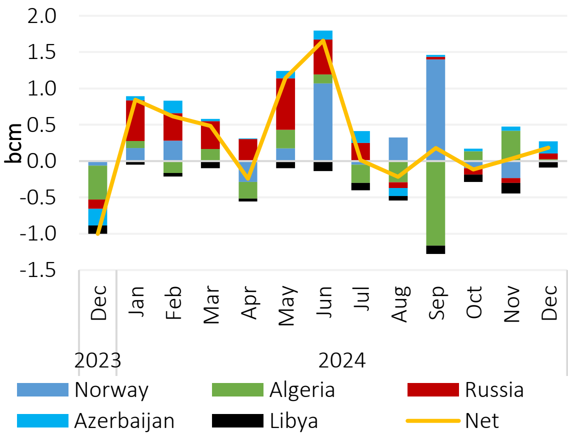
Additionally, total PNG imported by the EU in 2024 increased by 3% compared with the previous year (Figure 71). Russia, Norway and Azerbaijan all contributed more PNG volumes in 2024 than in the previous year. Since July 2024 the y-o-y variation in the EU's PNG imports has been minimal, reflecting the market stabilisation (Figure 72).

Figure 71: Year-to-date EU PNG imports by supplier



Source: GECF Secretariat based on data from Refinitiv

Figure 72: Y-o-y variation in EU PNG supply

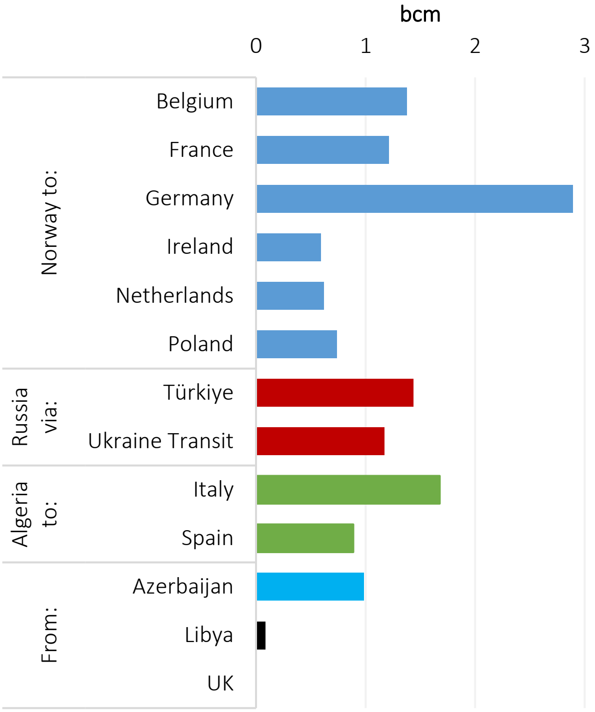


Source: GECF Secretariat based on data from Refinitiv

Figure 73 shows the PNG imports to the EU via the major supply routes in December 2024. There were m-o-m increases in flows from Norway via five of its six supply routes, with only the flows to the Netherlands decreasing by 4%. Russian supply via Turkstream increased by 3% m-o-m, with this supply route accounting for 55% of its PNG exports to the EU. The Italian market accounted for 65% of Algeria's PNG exports to the EU during the month. Similar to the month before, there was virtually no PNG supply to the European mainland via the interconnectors with the UK.

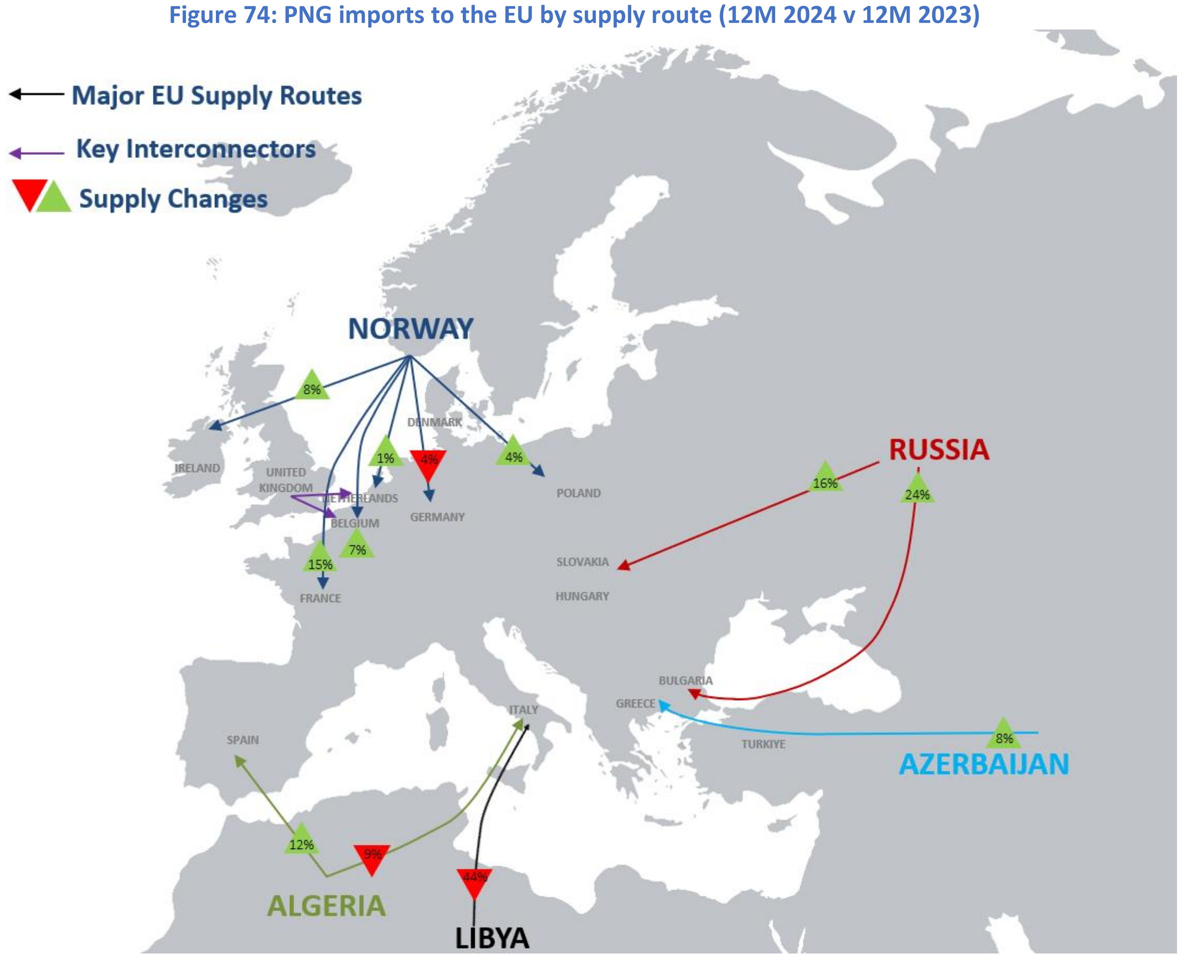
Figure 74 shows the PNG imports to the EU via the major supply routes during 2024, compared with the previous year. There were increased imports from both Russia and Azerbaijan. Norwegian supply to Germany declined, but this was offset by improved flows to its other markets. There was also 48% less regasified LNG delivered via the UK.

Figure 73: EU PNG imports by supply route, in December 2024



Source: GECF Secretariat based on data from Refinitiv

Figure 74: PNG imports to the EU by supply route (12M 2024 v 12M 2023)

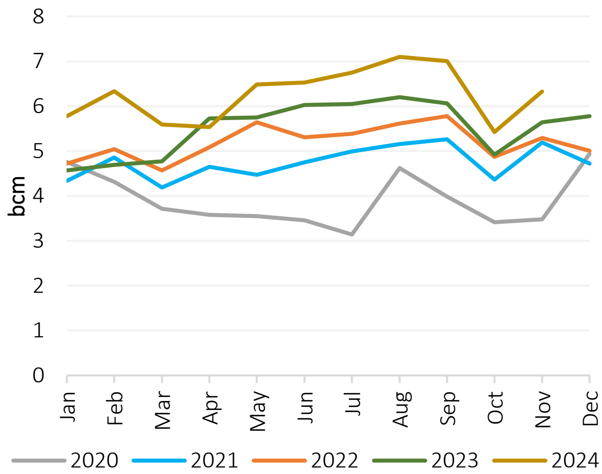


Source: GECF Secretariat based on data from Refinitiv

4.1.2 Asia

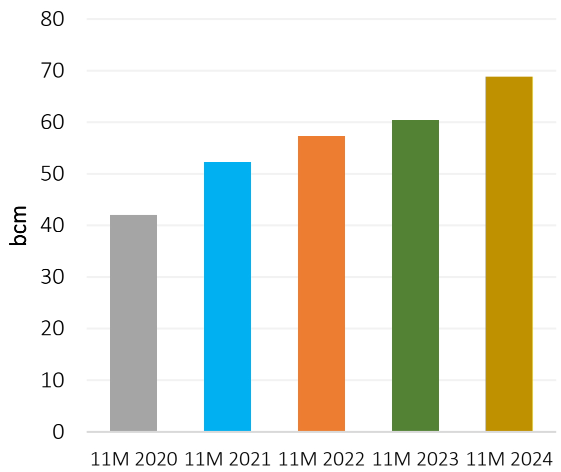
China's PNG imports continued to increase in 2024. In November 2024, there were 6.3 bcm of PNG imported, which was 12% greater than the previous year (Figure 75). Following the holiday celebrations in the previous month, PNG imports rebounded by 17% m-o-m. As a result, the share of PNG in China's total gas imports rose to 43% during the month. From January to November 2024, China imported 69 bcm, which represented an increase of 14% compared to the previous year (Figure 76).

Figure 75: Monthly PNG imports in China



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

Figure 76: Year-to-date PNG imports in China



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

In September 2024, Singapore imported 0.50 bcm of PNG from Indonesia and Malaysia, which was 3% less than one year ago (Figure 77). PNG imports also decreased by 8% m-o-m, returning to the average level observed during the other months of 2024.

In the same month, Thailand imported 0.40 bcm from Myanmar. This volume was 11% lower y-o-y, as well as 8% lower than the previous month (Figure 78).

Figure 77: Monthly PNG imports in Singapore

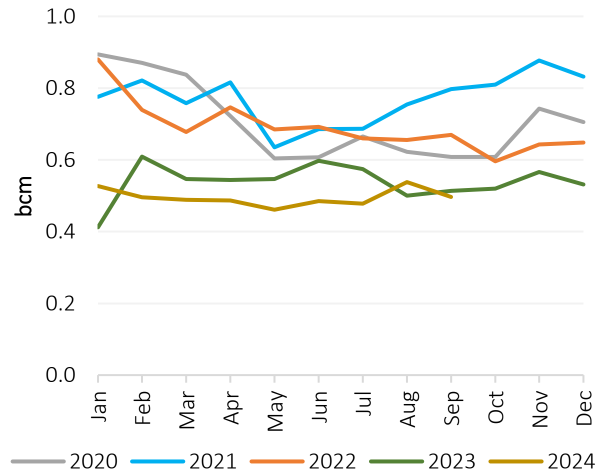
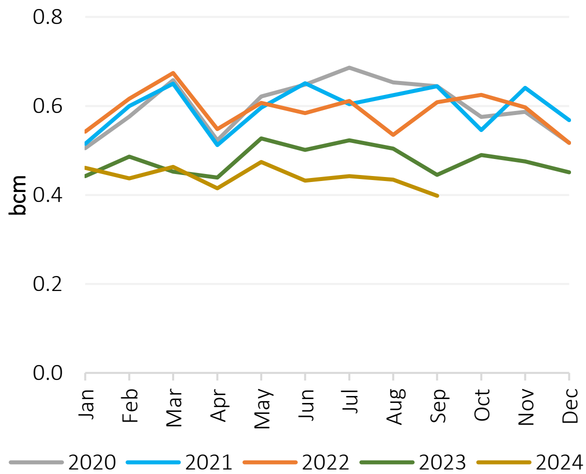


Figure 78: Monthly PNG imports in Thailand



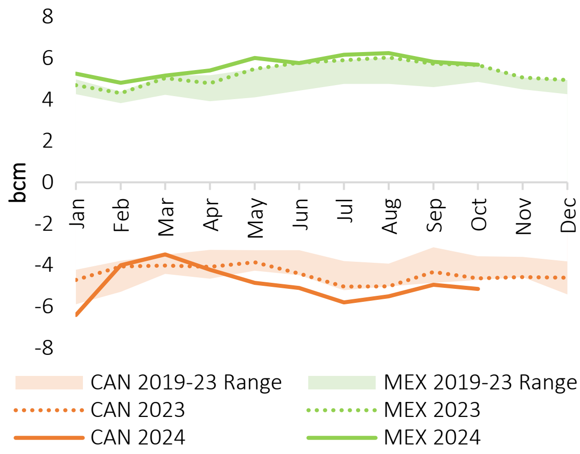
Source: GECF Secretariat based on data from JODI Gas

4.1.3 North America

In October 2024, Mexico imported 5.7 bcm of PNG from the US. This volume was the same as the level of one year ago, but was 2% lower than the previous month (Figure 79). Mexican PNG imports in 2024 rose by 5% y-o-y to reach 56 bcm.

Net PNG flows from Canada to the US reached 5.2 bcm during the month, which was 11% higher y-o-y, and 4% higher than the previous month. In October, flows from Canada to the US increased m-o-m to 7.2 bcm, while exports from the US to Canada remained unchanged at 2.0 bcm.

Figure 79: Net US PNG exports (+) and imports (-)



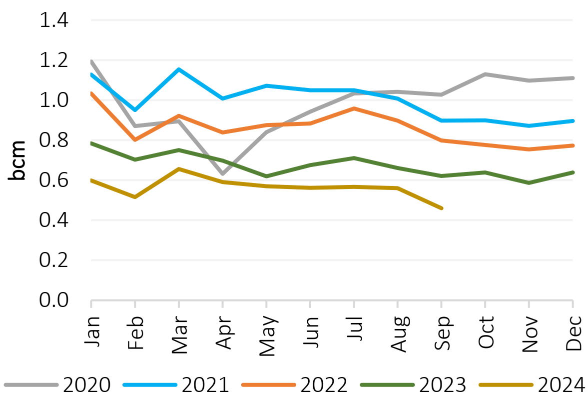
Source: GECF Secretariat based on data from US EIA

4.1.4 Latin America and the Caribbean

Bolivia exported 0.46 bcm of PNG to Brazil and Argentina in September 2024. With Bolivia's export contract with Argentina having ended during the month, this volume represented a 26% decrease from one year ago, and an 18% decrease from the previous month (Figure 80). Total gas exports during the nine months of 2024 fell by 18% to reach 5.1 bcm.

Argentina exported 0.14 bcm of PNG to Chile during the same month. This was a 55% increase y-o-y, and was also 21% greater than the previous month.

Figure 80: Monthly PNG exports from Bolivia



Source: GECF Secretariat based on data from JODI Gas

4.1.5 Other developments

Azerbaijan expands gas exports to Europe: From 1 December 2024, Azerbaijan's State Oil Company (SOCAR) commenced a gas supply contract for the export of pipeline gas to the largest state-owned energy provider in Slovakia. According to SOCAR, this deal represents a short-term agreement, which may lead to a longer-term partnership in the future. Slovakia now becomes the twelfth country to receive gas from Azerbaijan, following Turkiye, Georgia, Italy, Greece, Bulgaria, Romania, Hungary, Serbia, Slovenia, Croatia and North Macedonia.

Power of Siberia pipeline reaches full capacity: Russia's pipeline gas supply to China via the Power of Siberia pipeline (POS), which was launched in December 2019, was ramped up to reach the full designed capacity of over 100 mmcm/day (38 bcma) starting from 1 December 2024, one month earlier than planned. This comes along with the announcement of the completion of the final phase of POS, specifically internal lines within China.

4.2 LNG trade

4.2.1 LNG imports

In December 2024, global LNG imports declined for the second consecutive month, falling by 0.3% (0.10 Mt) y-o-y to 38.24 Mt (Figure 81), despite a notable rise in global LNG exports during the same period. The decline was driven by reduced imports in Asia Pacific and Europe, partially offset by stronger inflows into the LAC and MENA regions. This decrease is linked to a reduction in floating LNG cargoes at the end of 2024 compared to the previous year. In 2023, a steep contango in September and October resulted in a significant number of floating LNG cargoes, delaying deliveries to November and December. In contrast, LNG deliveries in 2024 were more evenly distributed, contributing to the decline in imports observed in December (Figure 82).

Figure 81: Trend in global monthly LNG imports

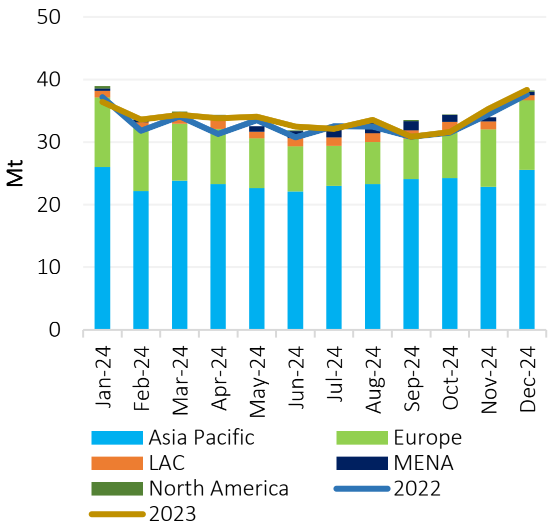
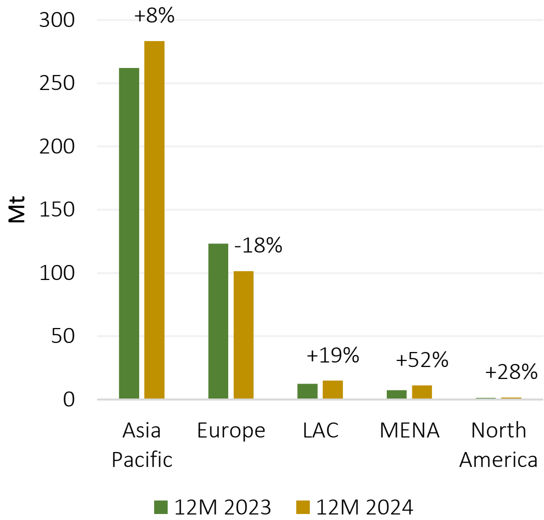


Figure 82: Trend in YTD regional LNG imports



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.1.1 Europe

In December 2024, Europe's LNG imports continued to be weaker than the previous year, recording a decrease of 1.7% (0.19 Mt) y-o-y to stand at 11.06 Mt (Figure 83). However, it should be noted that this is the lowest y-o-y decrease since Europe's LNG imports started declining in July 2023. Furthermore, this is Europe's highest monthly LNG imports since January 2024. France and the Netherlands recorded notable declines in their LNG imports, which were partially offset by stronger imports in Germany, Greece, Türkiye and the UK (Figure 84).

Despite the rise in France's gas consumption, its LNG imports declined, primarily due to a decrease in LNG imports from the US and reduced pipeline gas exports to Germany, driven by increased LNG imports in Germany. Similarly, weaker LNG imports in the Netherlands were largely attributed to lower imports from the US. In contrast, Germany and Greece saw stronger LNG imports, supported by the ramp-up of new LNG import terminals and increased gas consumption. Greece's LNG imports also rose due to higher pipeline gas exports to neighbouring countries, including Ukraine, which received an LNG cargo via the Alexandroupolis terminal in Greece during December. Türkiye's surge in LNG imports was fuelled by increased volumes from the US. Finally, the UK recorded higher LNG imports, driven by stronger gas consumption and reduced pipeline gas imports from Norway.

Figure 83: Trend in Europe's monthly LNG imports

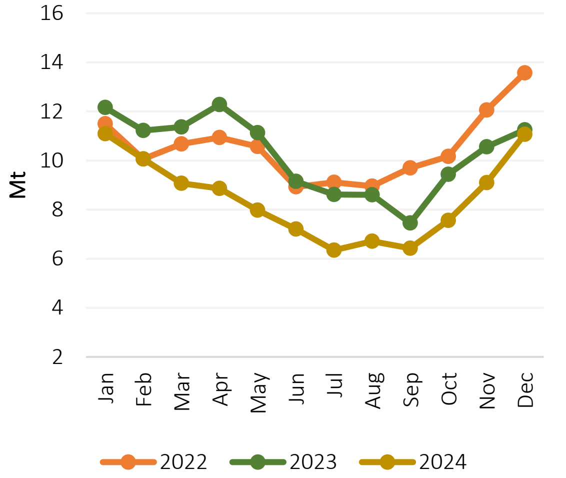
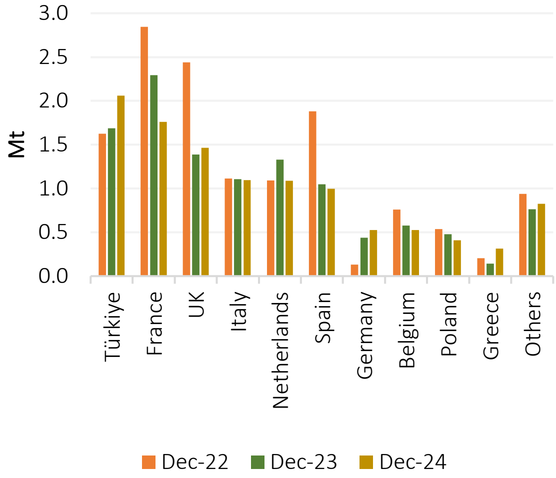


Figure 84: Top LNG importers in Europe



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.1.2 Asia Pacific

In December 2024 LNG imports in Asia Pacific experienced a significant y-o-y decline of 2.7% (0.71 Mt), falling to 25.60 Mt (Figure 85). This was the only decline in the region's LNG imports in 2024. The weaker LNG imports was driven by mild winter weather, ample LNG storage and higher spot LNG prices. China, Japan and South Korea led the decline, which were partially offset by an increase in LNG imports for Bangladesh, Indonesia and Singapore (Figure 86).

China's LNG imports declined primarily due to rising spot LNG prices, which dampened demand, combined with mild winter weather and high LNG inventory levels. In Japan, despite colder-than-average weather, higher nuclear power availability and ample LNG stocks limited LNG imports. Similarly, South Korea saw reduced LNG imports, driven by increased electricity generation from coal and nuclear sources and high LNG inventory levels. On the other hand, Bangladesh's LNG imports rose due to increased spot LNG purchases. Indonesia's imports grew as a result of higher intra-country LNG trade. Furthermore, Singapore's LNG imports increased due to weaker pipeline gas supply and greater demand for LNG bunkering.

Figure 85: Trend in Asia's monthly LNG imports

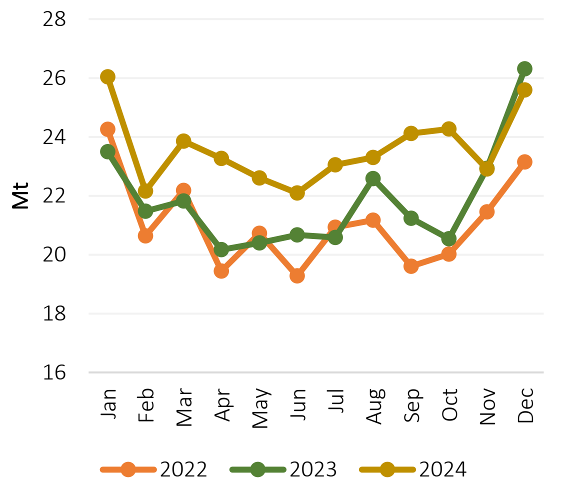
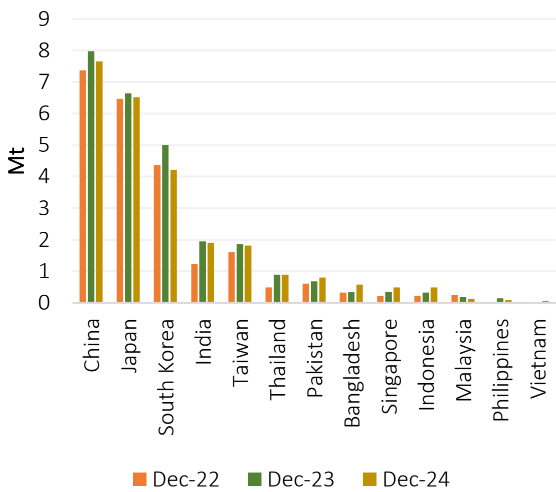


Figure 86: LNG imports in Asia Pacific by country



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.1.3 Latin America & the Caribbean (LAC)

In December 2024, LNG imports in the LAC region jumped by 62% (0.31 Mt) y-o-y to 0.81 Mt (Figure 87), which is the highest import for the month since 2021. Brazil, Chile, Colombia and Jamaica accounted for the largest increases in LNG imports in the region (Figure 88).

Brazil's LNG imports increased due to reduced hydroelectric output, which led to higher electricity generation from gas. In Chile, the rise in LNG imports was supported by stronger shipments from Trinidad and Tobago and the US. In November 2024, the Colombian government amended LNG import regulations, permitting companies other than electricity generators to import LNG, with the first such import occurring in December. Meanwhile, Jamaica continued to see higher LNG imports, primarily from Mexico and Nigeria.

Figure 87: Trend in LAC's monthly LNG imports

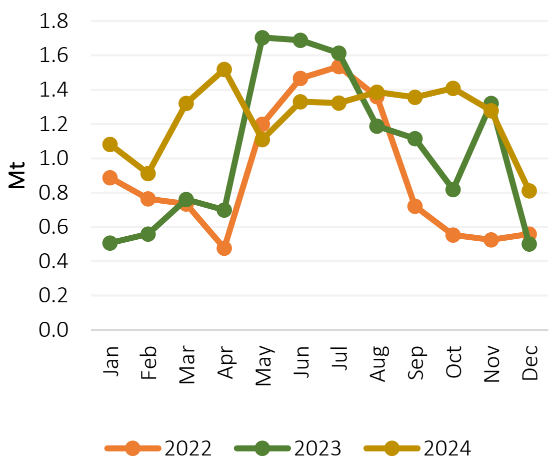
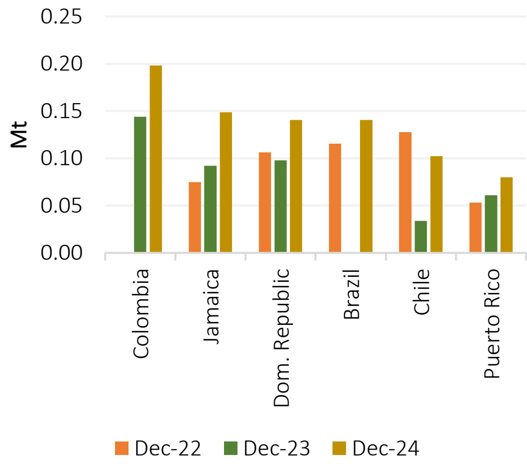


Figure 88: Top LNG importers in LAC



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.1.4 MENA

In December 2024 LNG imports in the MENA region soared by 283% (0.44 Mt) y-o-y, reaching 0.60 Mt (Figure 89), the highest level for December since 2017. This significant increase was primarily driven by Egypt (Figure 90) where higher LNG imports offset a domestic gas supply shortfall due to lower domestic gas production.

Figure 89: Trend in MENA's monthly LNG imports

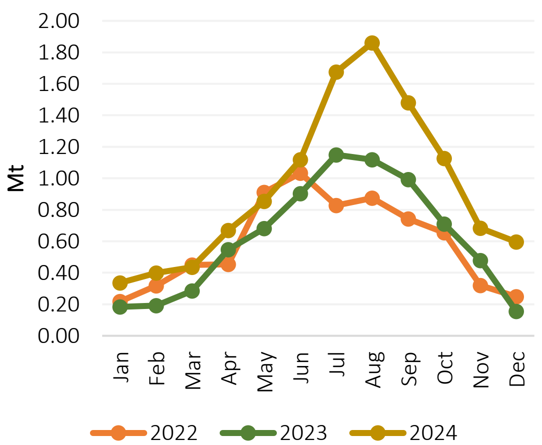
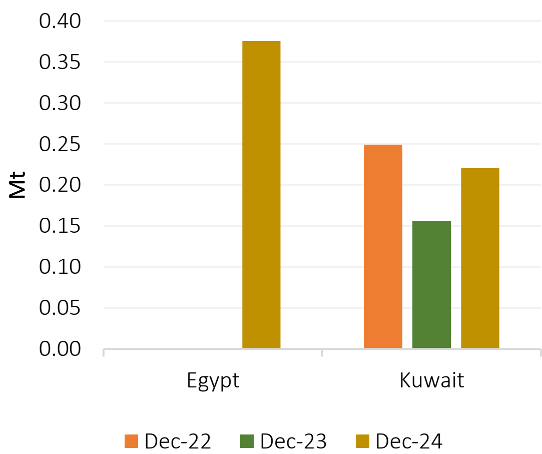


Figure 90: Top LNG importers in MENA



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.2 LNG exports

In December 2024, global LNG exports reached a record high of 38.00 Mt, representing an increase of 2.6% (0.97 Mt) y-o-y (Figure 91). This represented the largest monthly gain since August 2024. The growth in LNG exports came from all three major suppliers: GECF Member Countries, non-GECF countries, and LNG reloads. Non-GECF countries remained the largest exporters, increasing their market share to 52.3%, up from 52.1% in December 2023 (Figure 92). The share of LNG reloads also rose slightly, from 1.1% to 1.4%, while GECF Member Countries' share declined from 46.8% to 46.3% during the same period. In terms of the top LNG exports globally, this was led by the US, Australia and Qatar.

Figure 91: Trend in global monthly LNG exports

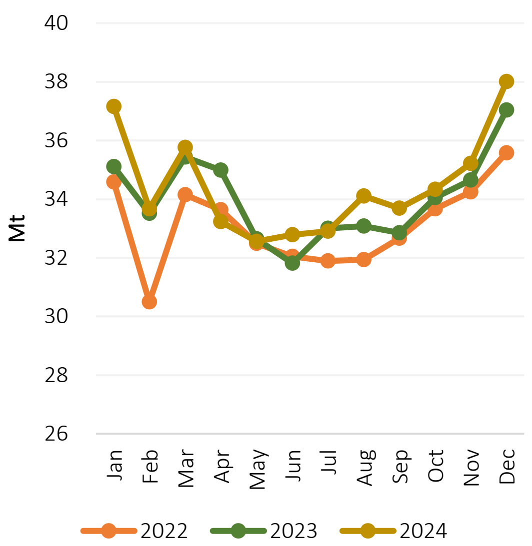
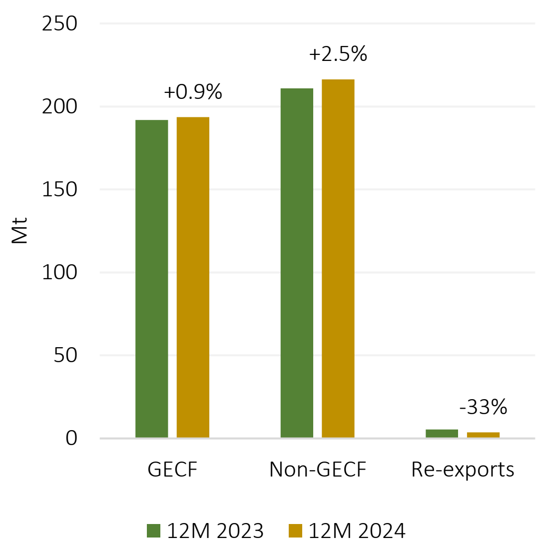


Figure 92: Trend in YTD LNG exports by supplier



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.2.1 GECF

In December 2024, LNG exports from GECF Member and Observer Countries grew by 1.5% (0.26 Mt) y-o-y to 17.59 Mt (Figure 93). This is GECF's highest LNG exports since January 2024 and a record high for the month of December. The uptick in GECF's LNG exports was driven by Malaysia, Nigeria, Russia and Trinidad and Tobago, which offset lower LNG exports from Algeria and Egypt (Figure 94).

The stronger LNG exports in Malaysia, Nigeria and Trinidad and Tobago were attributed to higher feed gas availability. In Malaysia, the repair of the Sabah-Sarawak gas pipeline supported the increased feed gas availability. In Russia, an increase in LNG exports from the Portovaya and Vysotsk LNG facilities contributed to the rise in its LNG exports. Conversely, in Algeria, planned maintenance activity at the Skikda facility, led to the drop in LNG exports. Meanwhile, the decline in Egypt's LNG exports was due to lower feed gas availability. The last LNG cargo exported from Egypt was in April 2024.

In December 2024, 67% of GECF's LNG exports were delivered to Asia Pacific, a decrease from 71% in the same month last year. Europe accounted for 29% of GECF's exports, up from 27% in December 2023. The remaining 3% was split, with 2% going to LAC and 1% to the MENA region.

Figure 93: Trend in GECF monthly LNG exports

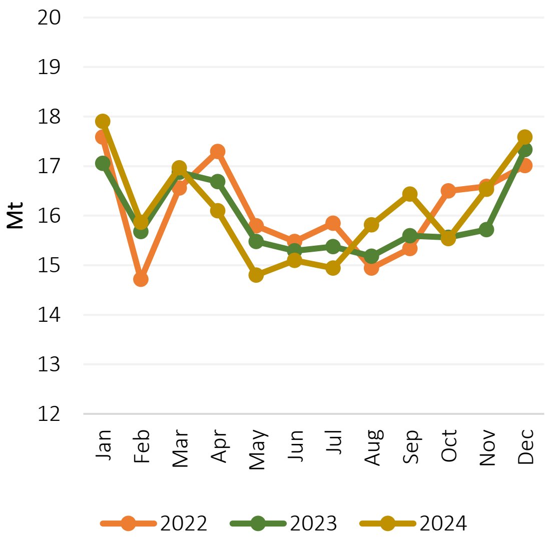
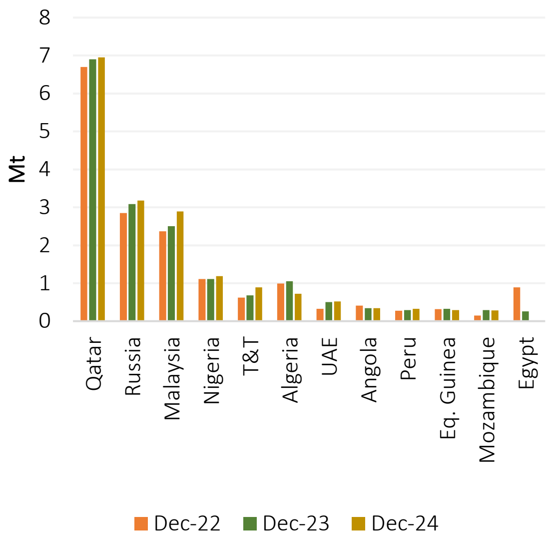


Figure 94: GECF's LNG exports by country



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.2.2 Non-GECF

In December 2024, LNG exports from non-GECF countries increased by 3.1% (0.59 Mt) y-o-y to 19.90 Mt (Figure 95). The higher LNG exports came mainly from Brunei, Cameroon, Congo, Indonesia and Mexico (Figure 96).

Increased LNG production from existing facilities drove the rise in LNG exports from Brunei and Cameroon. In Congo, Indonesia, and Mexico, the growth in exports was fuelled by the ramp-up in LNG production from new LNG facilities, including Congo FLNG 1, Tangguh LNG Train 3, and Altamira FLNG 1, respectively. Meanwhile, LNG exports from Australia and the US remained relatively stable. Notably, the US saw significant developments, with the Plaquemines LNG facility exporting its first cargo in December and the Corpus Christi LNG Stage 3 facility commencing LNG production.

Figure 95: Trend in non-GECF monthly LNG exports

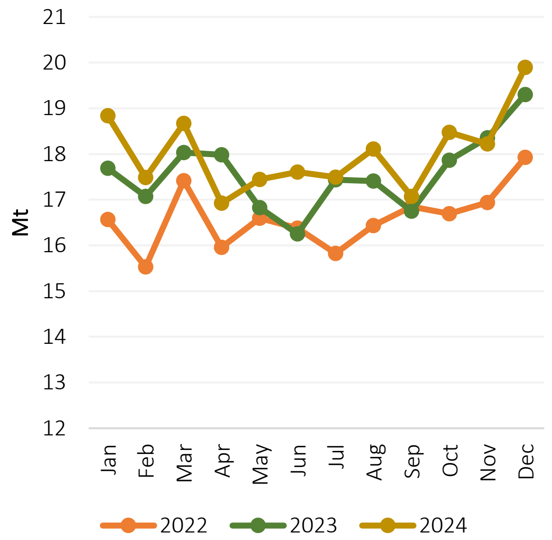
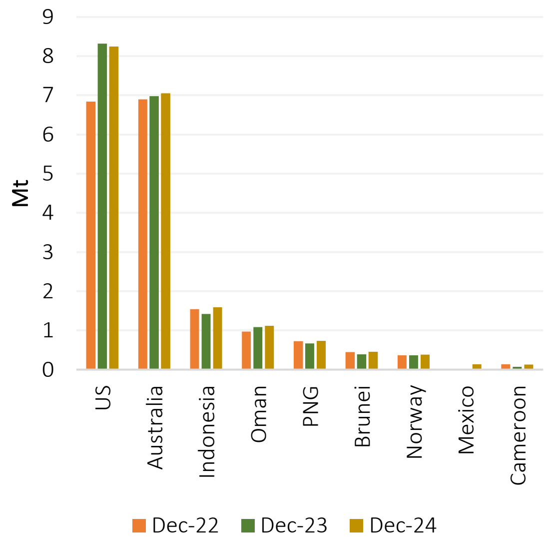


Figure 96: Non-GECF's LNG exports by country



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.3 Global LNG re-exports

In December 2024, global LNG re-exports rose by 29% (0.12 Mt) y-o-y to 0.52 Mt, representing the first increase since July 2024 and the highest level since November 2023 (Figure 97). The increase in LNG re-exports was driven mainly by Brazil, China and South Korea, while Spain and the US Virgin Islands recorded decreases (Figure 98).

In Brazil, an LNG cargo was re-exported from one terminal to another within the country. China's increase in LNG re-exports was driven by higher intra-country trade and increased shipments to neighbouring countries. South Korea re-exported its first LNG cargo since February 2023, delivering it to Taiwan. Spain's LNG re-exports declined due to reduced intra-regional trade within Europe. Lastly, the decrease in LNG re-exports from the US Virgin Islands was attributed to lower exports to Puerto Rico.

Figure 97: Trend in global monthly LNG re-exports

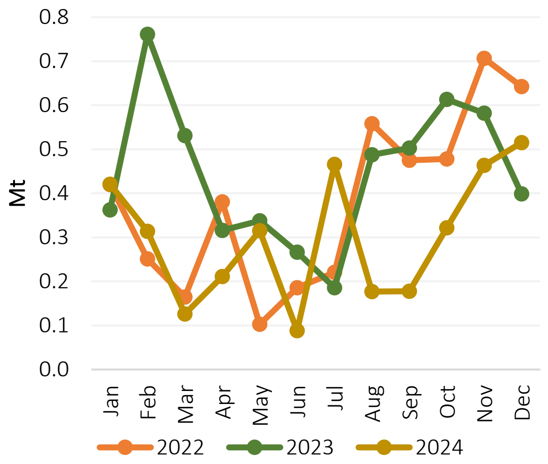
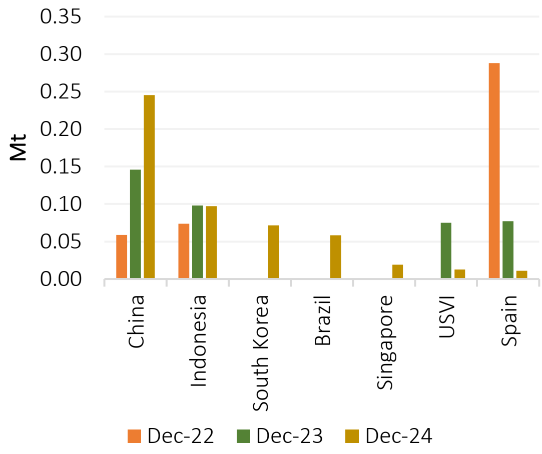


Figure 98: Global LNG re-exports by country



Source: GECF Secretariat based on data from ICIS LNG Edge

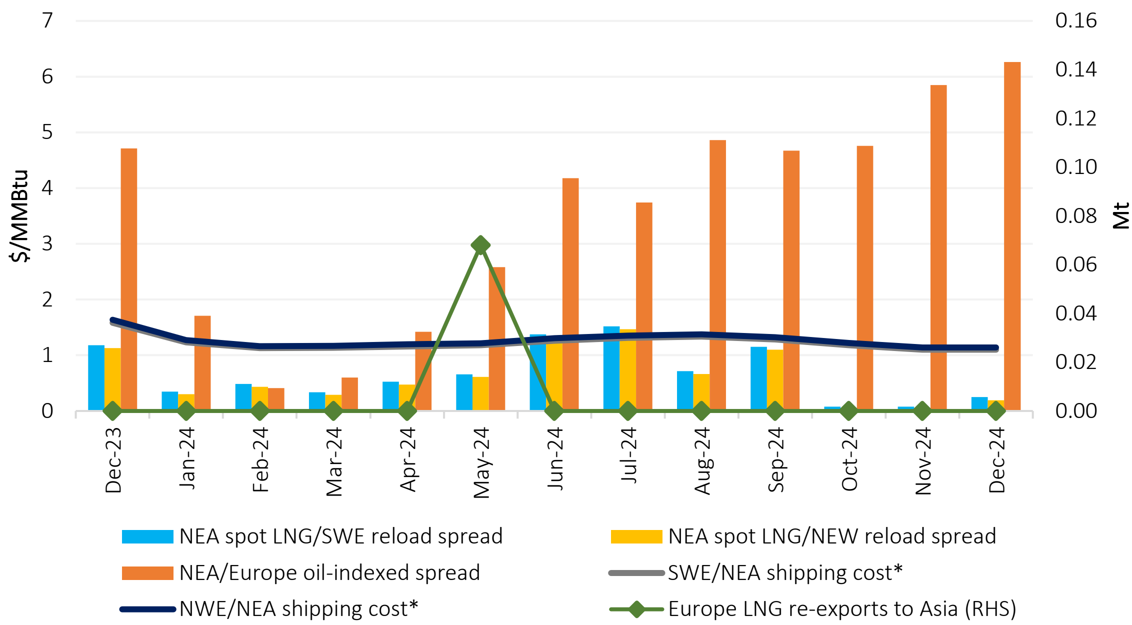
4.2.4 Arbitrage opportunity

In December 2024, the arbitrage opportunity for LNG re-exports from Europe to Asia Pacific remained absent due to the convergence of Asia spot LNG prices and European LNG reload prices. One-way spot shipping costs from Europe to Asia Pacific continued to hold a significant premium over the narrow price spreads between the two markets (Figure 99). However, the price differential between Asia Pacific spot LNG and European oil-indexed prices widened further, maintaining its premium over the one-way shipping costs.

Price spreads for NEA spot/SWE reload and NEA spot/NWE reload rose by 210% (\$0.17/MMBtu) and 550% (\$0.17/MMBtu) m-o-m, respectively, reaching \$0.25/MMBtu and \$0.20/MMBtu, driven by higher NEA spot LNG prices and stable European reload prices. Similarly, the spread between Asia Pacific spot LNG and European oil-indexed prices grew by 7.0% (\$0.41/MMBtu) m-o-m to \$6.26/MMBtu. Shipping costs on NEA/SWE and NEA/NWE routes remained steady at \$1.10/MMBtu and \$1.14/MMBtu, respectively.

No LNG re-exports from Europe to Asia Pacific were recorded in December 2024. Compared to December 2023, price spreads for NEA spot/SWE reload and NEA spot/NWE reload, as well as Europe-Asia spot LNG shipping costs, dropped by 79% (\$0.93/MMBtu), 83% (\$0.93/MMBtu), and 30% (\$0.49/MMBtu), respectively. Conversely, the spread between NEA spot LNG and European oil-indexed prices rose by 33% (\$1.55/MMBtu) y-o-y.

Figure 99: Price spreads & shipping costs between Asia & Europe spot LNG markets

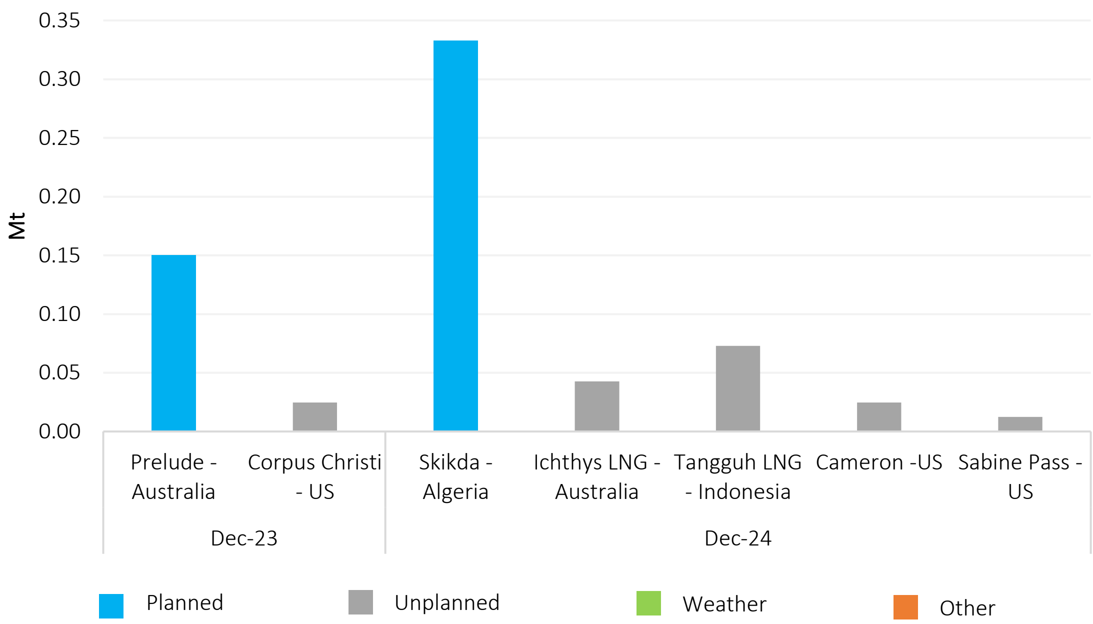


Source: GECF Secretariat based on data from GECF Shipping Model, Argus and ICIS LNG Edge
(*): One-way spot shipping cost

4.2.5 Maintenance activity at LNG liquefaction facilities

In December 2024, the cumulative impact of scheduled maintenance, unplanned outages, and other factors at global liquefaction plants reached 0.15 Mt, almost tripled from 0.17 Mt in December 2023 to 0.49 Mt (Figure 100). The major maintenance activities included planned maintenance at the Skikda LNG facility and unplanned outages at the Ichthys, Tangguh, Cameron and Sabine Pass LNG plants.

Figure 100: Maintenance activity at LNG liquefaction facilities during December (2023 and 2024)



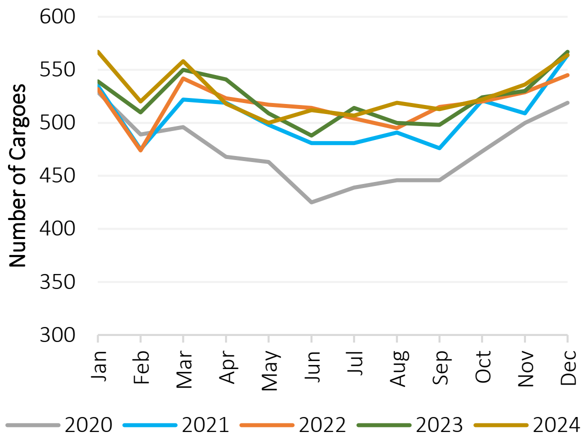
Source: GECF Secretariat based on information from Argus, ICIS LNG Edge and Refinitiv

4.2.6 LNG shipping

There were 564 LNG cargoes exported during December 2024, which was three less than one year ago (Figure 101). As expected with the seasonal trend, this figure represented a 5% increase when compared with the total shipments in the previous month. Over the course of 2024, there were 6,336 cargoes exported globally, which was an increase of 66 shipments when compared with the same period in 2023.

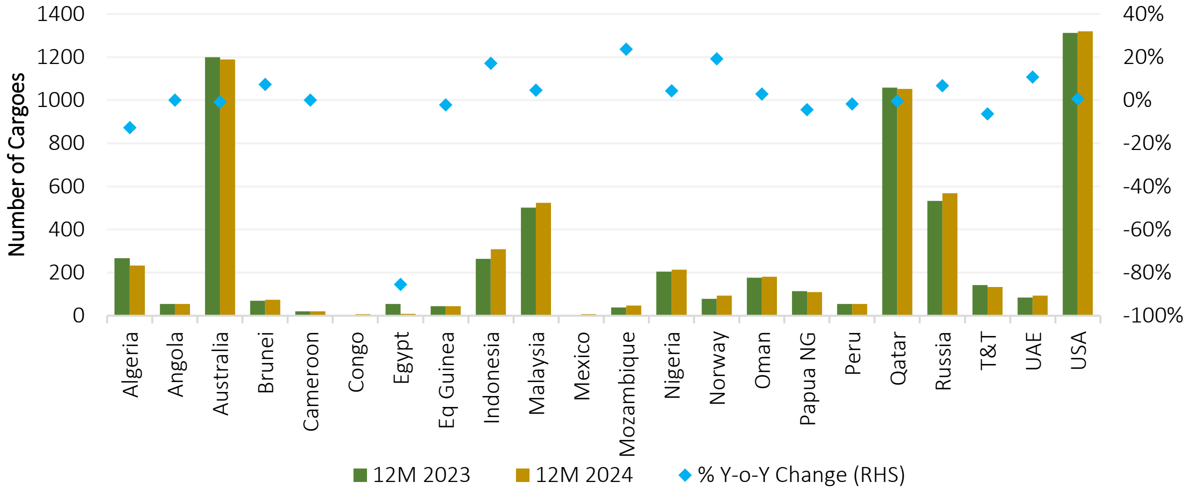
Indonesia delivered 45 more cargoes in 2024 than in the previous year, while Russia exported 36 more cargoes. At the same time, Mozambique increased shipments by 24%, followed by Norway at 19% (Figure 102).

Figure 101: Number of LNG export cargoes



Source: GECF Secretariat based on data from ICIS LNG Edge

Figure 102: Changes in LNG cargo exports



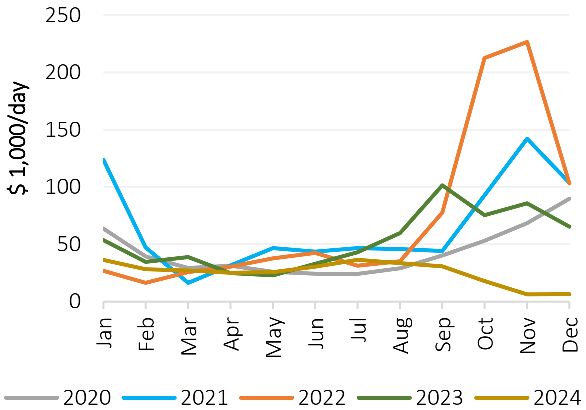
Source: GECF Secretariat based on data from ICIS LNG Edge

After reaching the historical low point in the previous month, the monthly average spot charter rate for steam turbine LNG carriers picked up slightly in December 2024, increasing by 2% m-o-m to reach $6,400 per day (Figure 103). However, this average charter rate was still 90% lower than one year ago, and also stood at $80,300 per day lower than the recent five-year average price for the month of December. Nevertheless, charter rates for the other segments of the global LNG carrier fleet continued to slide during the month. The average spot charter rate for TDFE vessels fell by 9% m-o-m to reach $13,700 per day, while the average spot charter rate for two-stroke vessels fell by 11% m-o-m to reach $21,900 per day.

In December 2024, there were very little changes to the market dynamics which have been in place in the recent months. Factors such as elevated storage levels and stable pipeline supply in Europe have limited the number of cargoes used as floating storage. This reason, along with the large number of new LNG carrier deliveries, continued to keep charter rates depressed. Shipping demand may rebound in the coming weeks as the northern hemisphere winter progresses, which may spur competition for cargoes between the Atlantic and Pacific Basins.

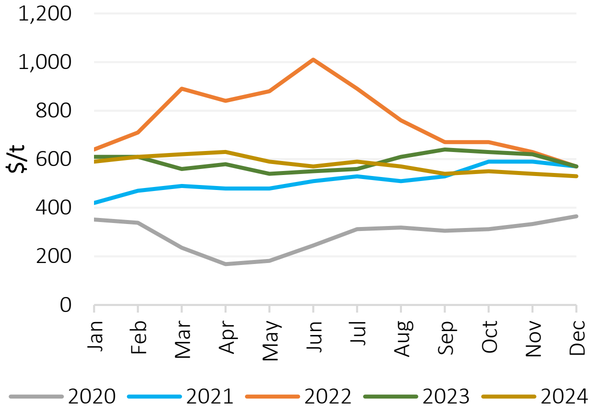
The average price of shipping fuels in December 2024 decreased by 2% m-o-m, to reach $530 per tonne (Figure 104). This average price was also 7% lower y-o-y, but was 10% higher than the recent five-year average price for that month.

Figure 103: Average LNG spot charter rate



Source: GECF Secretariat based on data from Argus

Figure 104: Average price of shipping fuels

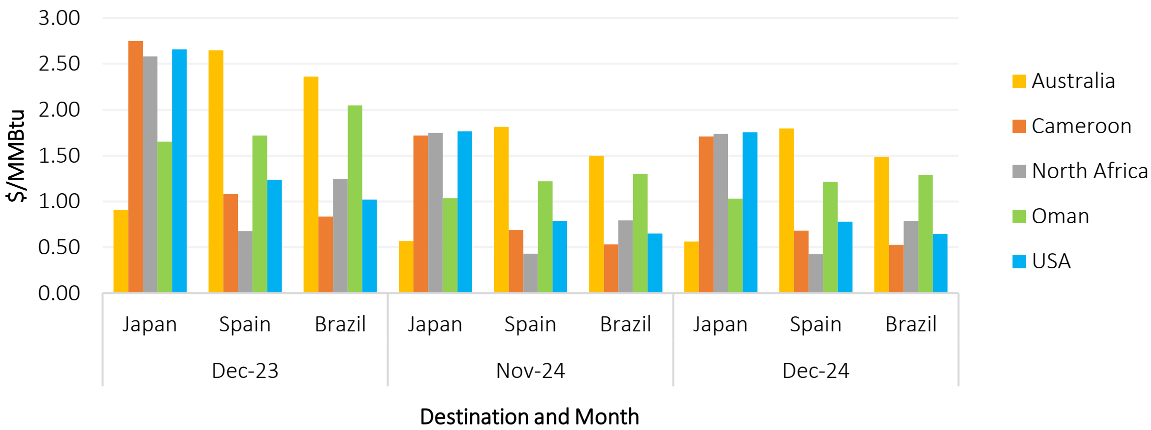


Source: GECF Secretariat based on data from Argus

In December 2024, the LNG spot shipping costs for steam turbine carriers were virtually unchanged relative to the previous month, falling by just up to $0.02/MMBtu on certain routes (Figure 105). This was driven by the small level of variation in the price fundamentals (the average LNG carrier spot charter rate, the cost of LNG shipping fuels, and the delivered spot LNG prices), when compared with the previous month.

When compared with one year ago, the monthly average spot charter rate was much lower in December 2024, while the delivered spot LNG prices were slightly higher. As a result, LNG shipping costs were up to $1.04/MMBtu lower than in December 2023.

Figure 105: LNG spot shipping costs for steam turbine carriers



Source: GECF Shipping Cost Model

4.2.7 Other developments

US Plaquemines LNG facility exports its first LNG cargo: On 26 December 2024, Venture Global, a US-based LNG project developer, exported its first LNG cargo from the Plaquemines LNG facility in Louisiana. The first phase of this facility boasts a 13.8 Mtpa capacity, featuring 22 modular units across 11 blocks. The facility was constructed in record time, with exports commencing just 30 months after the final investment decision in May 2022. The maiden cargo was delivered to Wilhelmshaven, Germany.

Egypt's EGAS signs deal with New Fortress Energy for second LNG FSRU: On 9 December 2024, Egypt's state-owned Egyptian Natural Gas Holding Company (EGAS) signed a 10-year charter agreement with New Fortress Energy (NFE) for a second LNG floating storage regasification unit (FSRU). The Energos Eskimo FSRU, with a capacity of 160,000 m³ and an annual regasification capacity of 5.7 Mtpa, is set to be deployed at Ain Sokhna in summer 2025.

Nigeria's Ace awards FEED to Wison Energies for an FLNG unit: On 19 December 2024, Nigeria's Ace Gas and LNG (Ace) awarded a front-end engineering and design (FEED) contract to China's Wison Energies for a floating LNG (FLNG) unit and a power barge to be stationed off Nigeria's coast. The FLNG is designed to have a 3 Mtpa production capacity and process up to 500 mmscfd of gas, with 50 mmscfd allocated to supply the power barge. Wison intends to incorporate Chart Industries' integrated pre-cooled single mixed refrigerant (IPSMR) technology in the project design.

Shell and YPF sign agreement to develop Argentina LNG project: On 19 December 2024, Shell and Argentina's state-owned oil company YPF formalized an agreement to jointly develop an LNG project in Argentina. The project, planned as a multi-stage initiative, is estimated to cost $50 billion and aims to achieve a production capacity of 10 Mtpa in its first phase. Previously, Malaysia's Petronas had been in discussions with YPF to co-develop the project but withdrew, with Shell stepping in to take its place. A final investment decision is anticipated in 2025.

Russia commences sea trials on new Arc7 LNG carrier: The 172,600 m³ Alexey Kosygin Arc7 ice-class LNG carrier, intended for use at the 19.8 mtpa Arctic LNG 2 export terminal and currently under construction at Russia's Zvezda shipyard in the Far East, has begun sea trials. This marks the first of Russia's self-built Arc7 vessels to do so. Arc7 LNG carriers, the highest ice-class rating, are essential for winter loadings at the Arctic LNG 2 export terminal due to the sea ice buildup in the Ob Gulf and Kara Sea surrounding the facility.

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

Table 1: New LNG sale agreements signed in December 2024

Contract Type	Exporting Country	Project	Seller	Importing Country	Buyer	Volume (Mtpa)	Duration (Years)
SPA	Qatar	Ras Laffan	QatarEnergy	China	Shell	3	20
SPA	UAE	Ruwais LNG	ADNOC Gas	Malaysia	Petronas	1	15
SPA	Portfolio	Portfolio	Sembcorp Industries	Singapore	Sembcorp Industries	0.6	10
SPA	Angola	Angola LNG	Angola LNG	European Union	SEFE	0.5	1
SPA	Portfolio	Port	Santos	Japan	Shizuoka Gas	0.4	12
SPA	US	Lake Charles LNG	Energy Transfer	Portfolio	Chevron	2	20

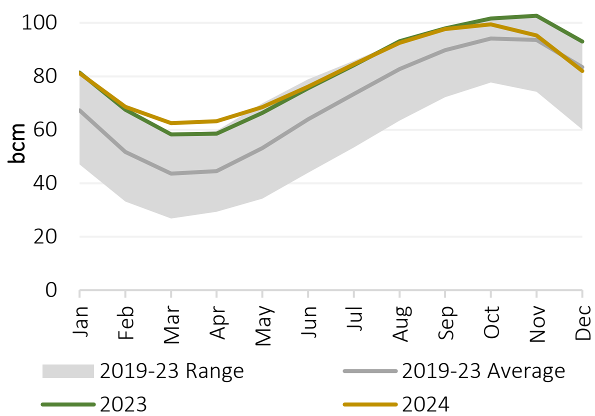
Source: GECF Secretariat based on Project Updates and News
N/A: Not available

5 Gas Storage

5.1 Europe

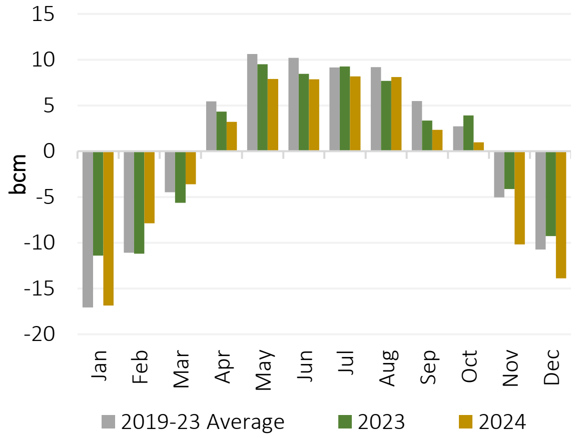
The EU countries continue to withdraw from its gas reserves as the winter season progresses. In December 2024, the average daily volume of gas in underground storage decreased to 81.9 bcm, from 95.2 bcm in the previous month (Figure 106). The average capacity across the region stood at 79% for the month. Moreover, this average storage level was 11.0 bcm less than one year ago, while falling 1.5 bcm lower than the five-year average for the month.

Figure 106: Monthly average UGS level in the EU



Source: GECF Secretariat based on data from AGSI+

Figure 107: Net gas injections in the EU



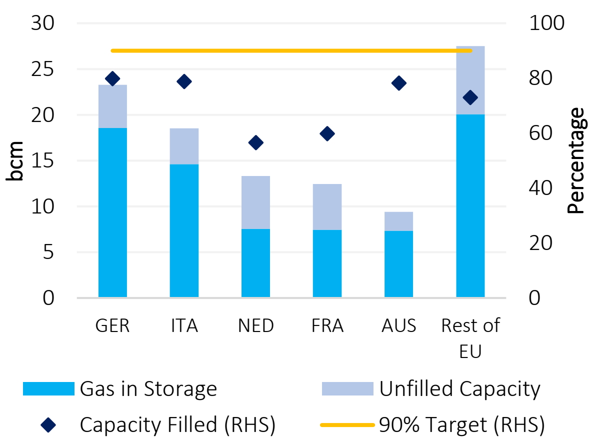
Source: GECF Secretariat based on data from AGSI+

There were 13.9 bcm of net gas withdrawal during the month, which resulted in gas stocks decreasing from 89.5 bcm on 30 November to 75.6 bcm on 31 December. The net withdrawal was greater than the 9.3 bcm in December 2023, as well as the five-year average for the month of 10.7 bcm (Figure 107). Since the start of winter, 24.1 bcm of gas was withdrawn, the largest depletion rate since the winter of 2017/18. By the end of December 2024, the average storage level in Germany, Italy and Austria remained around 80% (Figure 108).

Notably, in November 2024, the European Commission established new targets for the filling of storage sites across the region in 2025. Accordingly, the regional target for 1 February 2025 is 49%, which is a tightening compared to the target of 45% set for 1 February 2024.

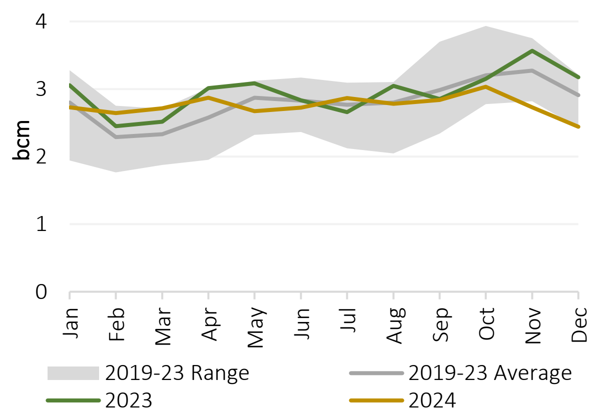
Additionally, there were 2.4 bcm of LNG stored in the EU countries in December 2024, which was 23% lower y-o-y, and 16% lower than the five-year average (Figure 109).

Figure 108: UGS in EU countries as of Dec 31, 2024



Source: GECF Secretariat based on data from AGSI+

Figure 109: Total LNG storage in the EU



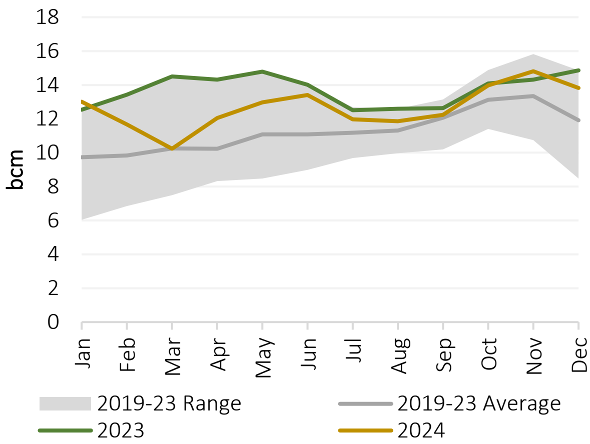
Source: GECF Secretariat based on data from ALSI

5.2 Asia Pacific

In December 2024, the combined volume of LNG in storage in Japan and South Korea fell to an estimated 13.8 bcm, which was 7% lower than the previous year (Figure 110). In 2024, the LNG storage levels have been consistently higher than the five-year average, and in December, the variation for the month reached 1.9 bcm.

As expected with gas demand rising to satisfy winter heating requirements, the combined LNG storage level decreased by 7% m-o-m. LNG storage in Japan and South Korea reached 7.6 bcm and 6.2 bcm respectively.

Figure 110: LNG in storage in Japan and South Korea



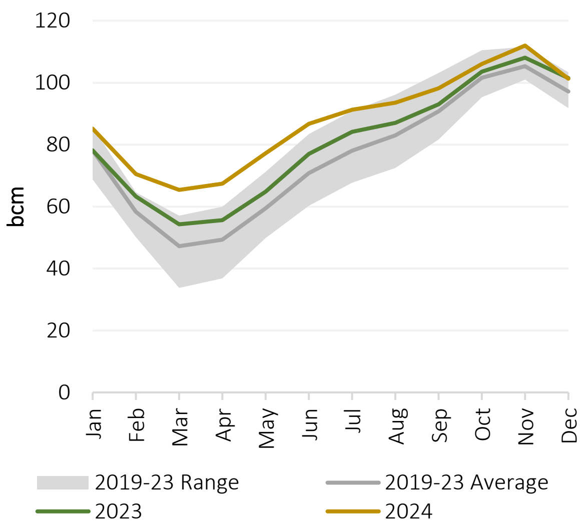
Source: GECF Secretariat based on data from Refinitiv

5.3 North America

Net gas withdrawals in the US commenced from the middle of November. In December 2024, the average daily volume of gas in storage decreased to 101.3 bcm, from 112.0 bcm in the previous month (Figure 111). The average capacity utilisation of the UGS sites in the US dropped to 76%.

For most of 2024, the US has maintained a gas storage level that was higher than both 2023 as well as the five-year average. In December 2024, the gas storage level finally fell to 0.2 bcm lower than the previous year, but was still 4.1 bcm more than the five-year average. Since the start of the 2024/25 winter season, there were 15.8 bcm of gas withdrawn in the US.

Figure 111: Monthly average UGS level in the US



Source: GECF Secretariat based on data from US EIA

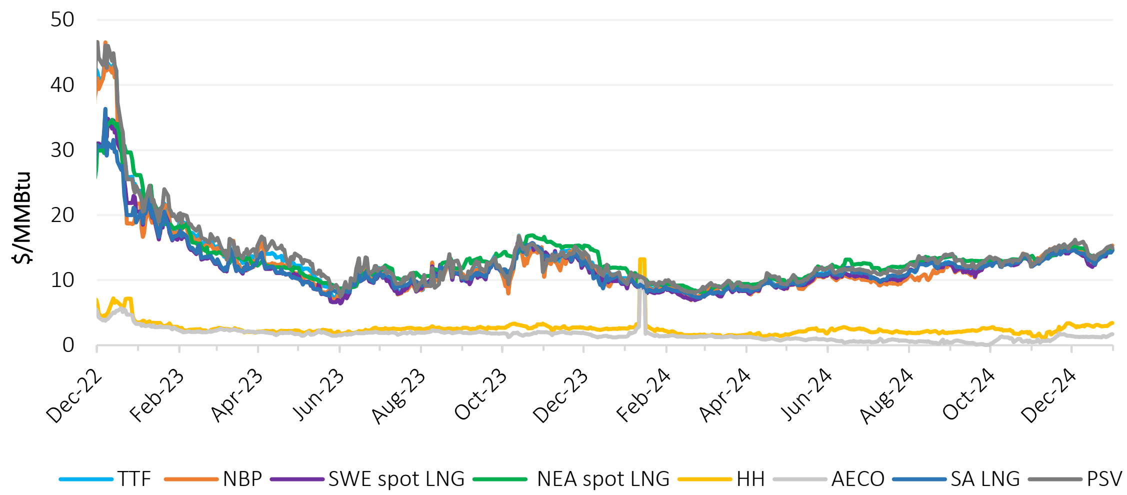
6 Energy Prices

6.1 Gas prices

6.1.1 Gas & LNG spot prices

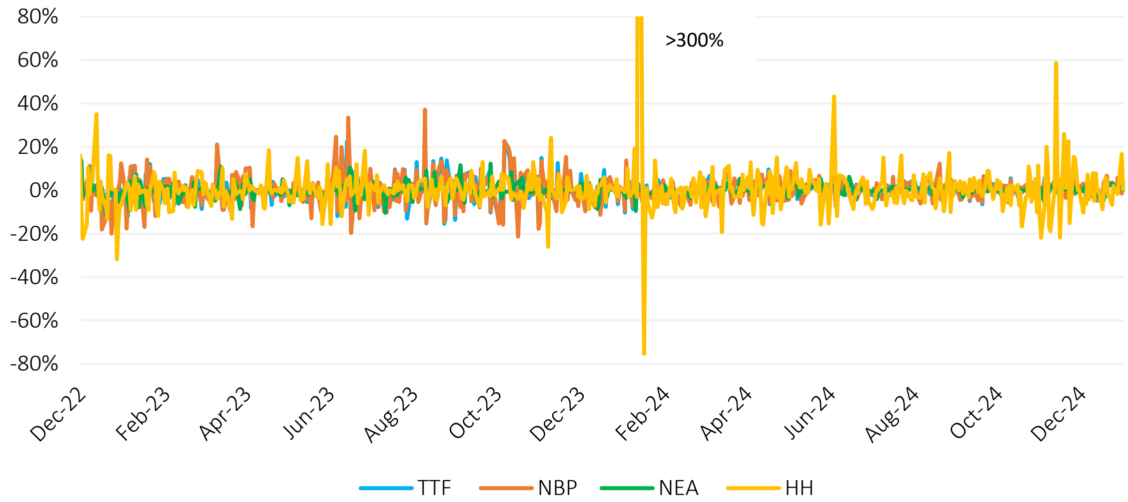
In December 2024, European gas and LNG spot prices held steady compared to the previous month, while Asian LNG prices experienced a slight increase, with overall market volatility remaining low (Figure 112 and Figure 113). Weather-driven demand played a key role in shaping prices, as colder temperatures increased gas consumption for heating. However, robust LNG supply and ample storage levels in both regions helped offset potential price increases. Looking ahead, weather conditions are expected to remain a critical factor influencing spot prices, with any cold snaps likely to exert additional upward pressure.

Figure 112: 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 113: Daily variation of spot prices



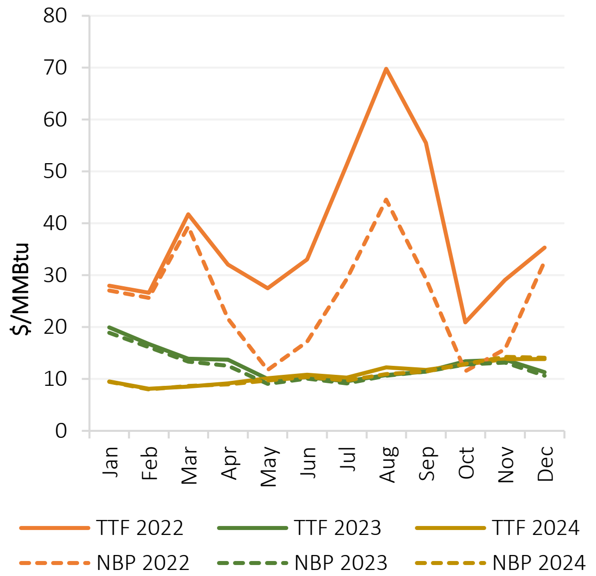
Source: GECF Secretariat based on data from Argus and Refinitiv Eikon

6.1.1.1 European spot gas and LNG prices

In December 2024, the TTF spot gas price averaged $13.82/MMBtu, remaining stable compared to the previous month, and reflecting an increase of 22% y-o-y. In addition, the NBP spot price averaged $14.08/MMBtu, reflecting a slight decrease of 1% m-o-m and an increase of 32% y-o-y (Figure 114).

The increase in spot prices was driven by weather-related factors. In particular, colder-than-normal temperatures boosted heating demand, while reduced wind generation led to greater reliance on gas-fired power generation. Supply concerns also played a role, with the impending expiration of the Russia-Ukraine gas transit deal on 1 January 2025 adding upward pressure on prices.

Figure 114: Monthly European spot gas prices



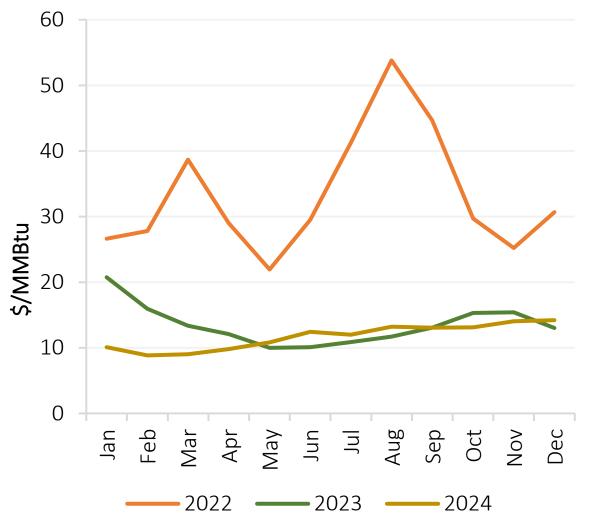
Source: GECF Secretariat based on data from Refinitiv Eikon

6.1.1.2 Asian spot LNG prices

In December 2024, the average Northeast Asia (NEA) spot LNG price averaged $14.21/MMBtu, reflecting increases of 1% m-o-m and 9% y-o-y. (Figure 115).

Asian LNG prices experienced a slight increase due to colder temperatures in some countries which boosted LNG demand. However, price gains were limited by weaker demand from China and healthy LNG inventories across the region. As a result, daily NEA spot LNG prices recorded a high of $15.23/MMBtu during the month.

Figure 115: Monthly Asian spot LNG prices



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

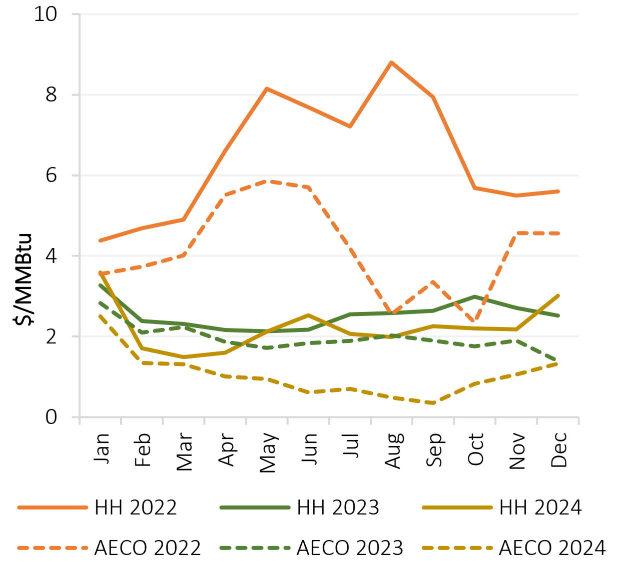
6.1.1.3 North American spot gas prices

In December 2024, the HH spot gas price averaged $3.01/MMBtu, reflecting a significant increase of 38% m-o-m. Additionally, it was 19% higher than the average price of $2.52/MMBtu observed in December 2023 (Figure 116).

Henry Hub prices climbed to a 23-month high of $3.40/MMBtu at the end of the month, excluding the January 2024 spike. This increase was driven by colder temperatures which boosted residential heating demand, strong gas-fired power generation and a decline in domestic production.

Meanwhile, in Canada, the AECO spot price averaged $1.33/MMBtu in December 2024, reflecting an increase of 25% m-o-m, but was 4% lower y-o-y.

Figure 116: Monthly North American spot gas prices



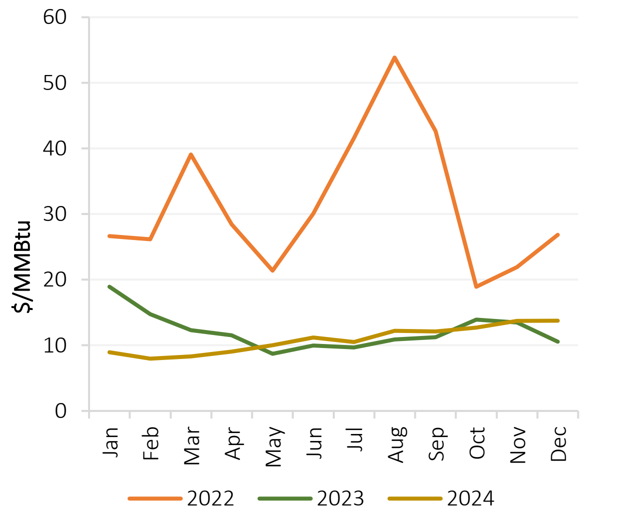
Source: GECF Secretariat based on data from Argus and Refinitiv Eikon

6.1.1.4 South American spot LNG prices

In December 2024, the South American (SA) LNG price was relatively stable compared to the previous month, averaging $13.75/MMBtu. Additionally, the SA LNG price was 30% higher compared to the average price of $10.54/MMBtu observed in December 2023 (Figure 117).

LNG spot prices in South America continued to align with the trends observed in European and Asian spot prices. The average LNG delivered prices in Argentina, Brazil and Chile were $13.71/MMBtu, $13.64/MMBtu and $13.89/MMBtu, respectively.

Figure 117: Monthly South American spot LNG prices

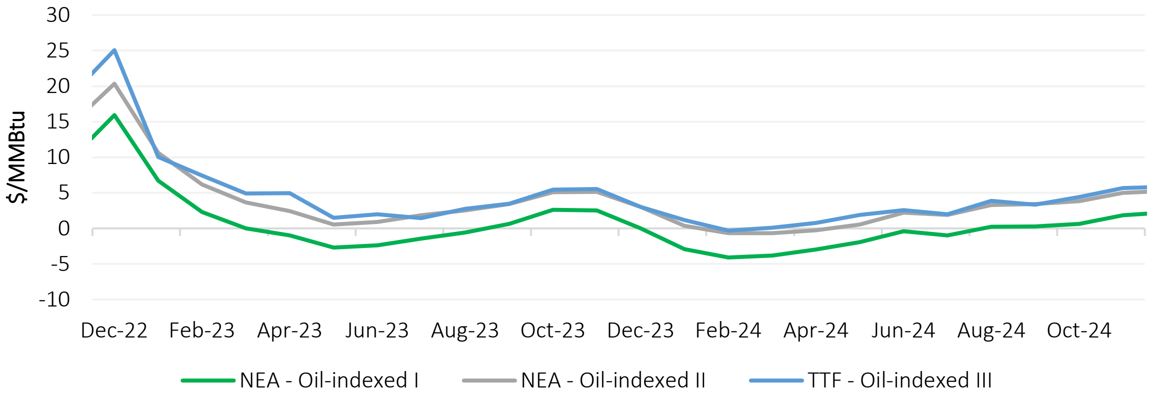


Source: GECF Secretariat based on data from Argus
Note: SA LNG price is an average of the LNG delivered prices for Argentina, Brazil and Chile based on Argus assessment

6.1.2 Spot and oil-indexed long-term LNG price spreads

In December 2024, the average Oil-indexed I LNG price was $11.97/MMBtu, reflecting declines of 2% m-o-m and 8% y-o-y. Similarly, the Oil-indexed II LNG price averaged $8.93/MMBtu, reflecting declines of 1% m-o-m and 13% y-o-y. Additionally, in Europe, the Oil-indexed III price averaged $7.95/MMBtu, reflecting declines of 2% m-o-m and 3% y-o-y. Furthermore, Oil-indexed I prices traded at a discount of $2/MMBtu over NEA spot LNG prices. Additionally, Oil-indexed II prices showed a discount of $5/MMBtu over the NEA spot LNG prices. Moreover, the average Oil-indexed III price held a discount of $6/MMBtu over the average TTF spot price (Figure 118).

Figure 118: Spot and oil-indexed LNG price spreads



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.

6.1.3 Regional spot gas & LNG price spreads

In December 2024, the NEA-TTF price spread remained positive, and widened compared to the previous month. The average premium of NEA spot LNG price over the average TTF spot price was $0.39/MMBtu (Figure 119). Meanwhile, the TTF-HH spread narrowed to $10.81/MMBtu (Figure 120).

Figure 119: NEA-TTF price spread

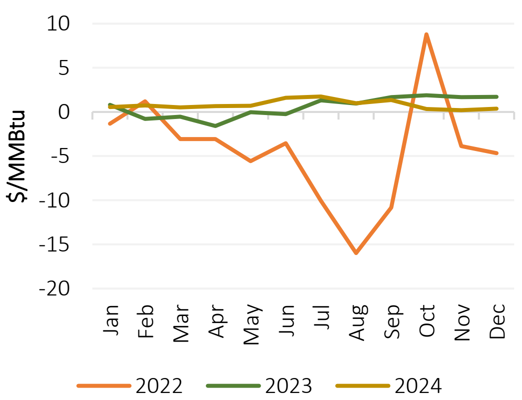
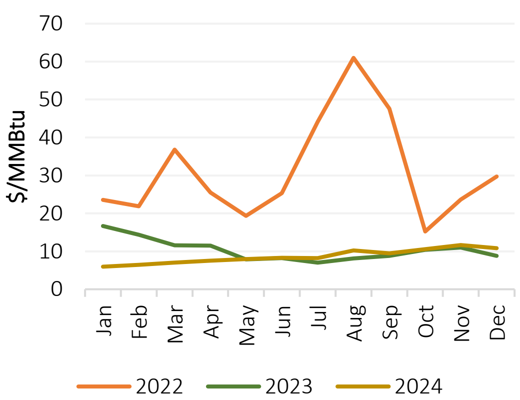


Figure 120: TTF-HH price spread



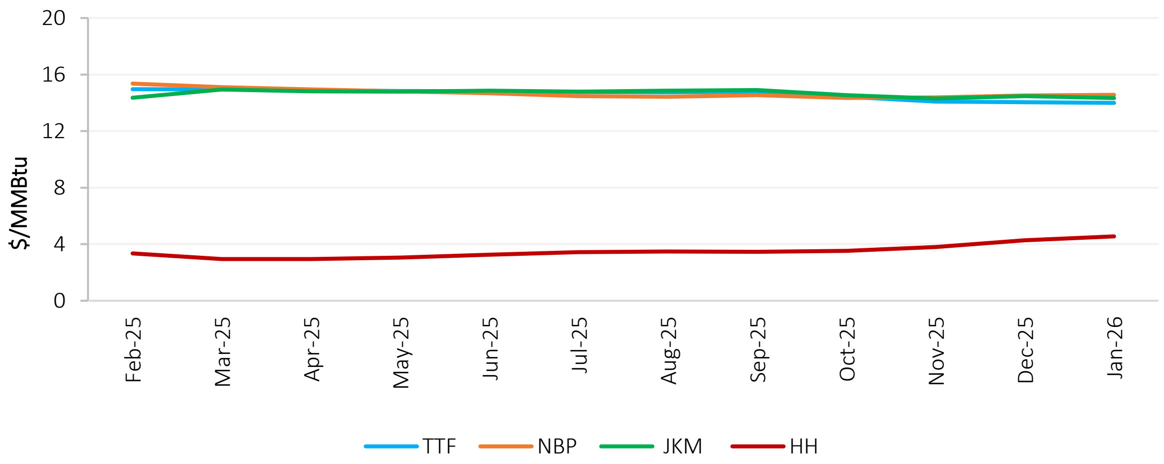
Source: GECF Secretariat based on data from Argus and Refinitiv Eikon

6.1.4 Gas & LNG futures prices

The average futures prices for TTF, NBP and JKM during the 12-month period from February 2025 to January 2026 were $14.61/MMBtu, $14.68/MMBtu and $14.66/MMBtu, respectively, as of 6 January 2025 (Figure 121Figure). Furthermore, these futures prices for the 12-month period are higher than the futures prices expectations considered on 8 December 2024 (as reported in the GECF MGMR December 2024). Additionally, the average Henry Hub futures price for the same period is $3.51/MMBtu, which is also higher than previous expectations (Figure 122Figure).

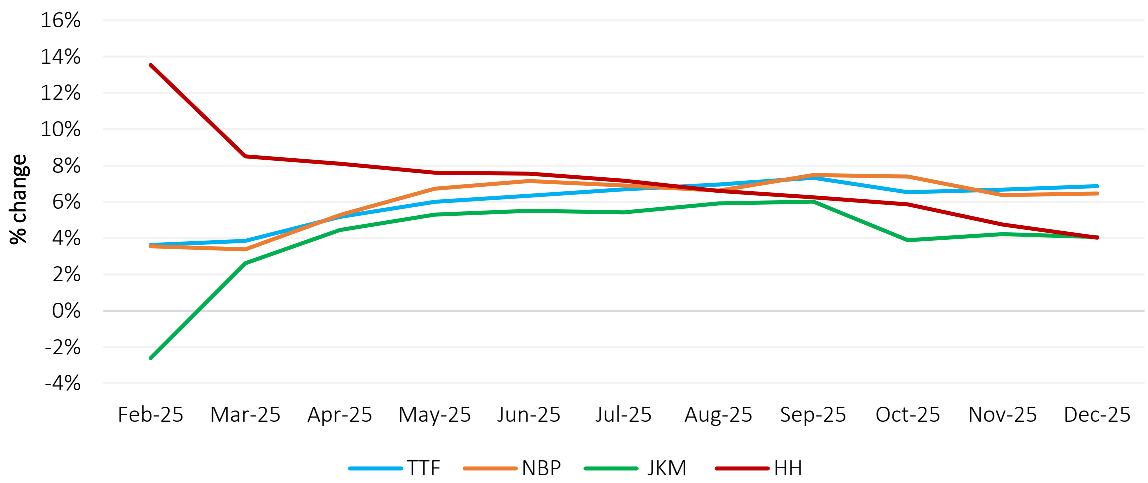
The JKM-TTF futures price spread is expected to be slightly negative in February 2025, indicating that Asian LNG prices may lose their premium over European spot prices. However, the spread turns marginally positive from March 2025 to January 2026.

Figure 121: Gas & LNG futures prices



Source: GECF Secretariat based on data from Refinitiv Eikon
Note: Futures prices as of 6 January 2025.

Figure 122: Variation in gas & LNG futures prices



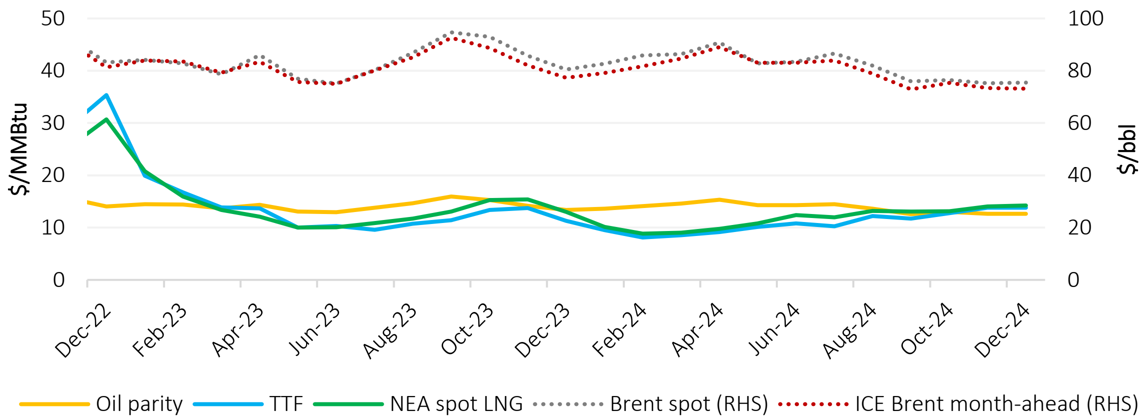
Source: GECF Secretariat based on data from Refinitiv Eikon
Note: Comparison with the futures prices as of 8 December 2024, as reported in GECF MGMR December 2024.

6.2 Cross commodity prices

6.2.1 Oil prices

In December 2024, the average Brent spot price was $75.52/bbl, remaining stable m-o-m and reflecting a decrease 6% y-o-y. The Brent month-ahead price averaged $73.15/bbl, remaining stable m-o-m and reflecting a decrease 5% y-o-y. Furthermore, in December 2024, TTF and NEA spot LNG prices traded at premiums of $1/MMBtu and $2/MMBtu to the oil parity price, respectively (Figure 123).

Figure 123: Monthly crude oil prices

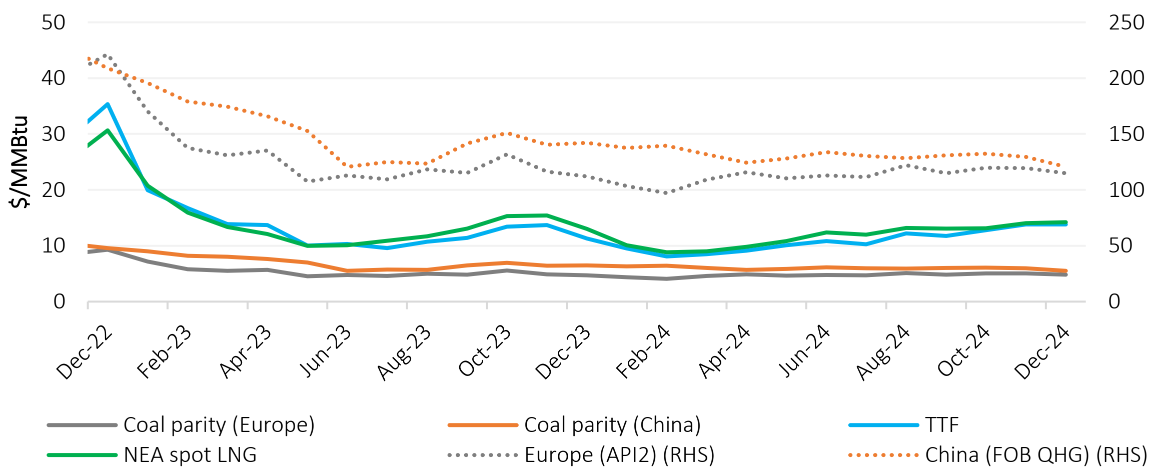


Source: GECF Secretariat based on data from Argus and Refinitiv Eikon
Note: Conversion factor of 5.8 was used to calculate the oil parity price in $/MMBtu based on the ICE Brent month-ahead price.

6.2.2 Coal prices

In December 2024, the European coal price (API2) averaged $114.80/T, reflecting a decline of 4% m-o-m and an increase of 2% y-o-y. The premium of TTF spot price over the API2 parity price stood at $9/MMBtu. Meanwhile, in China, the QHG coal price averaged $120.66/T, reflecting declines of 7% m-o-m and 15% y-o-y. The premium of NEA spot LNG price over the QHG parity price increased to $9/MMBtu (Figure 124).

Figure 124: Monthly coal parity prices

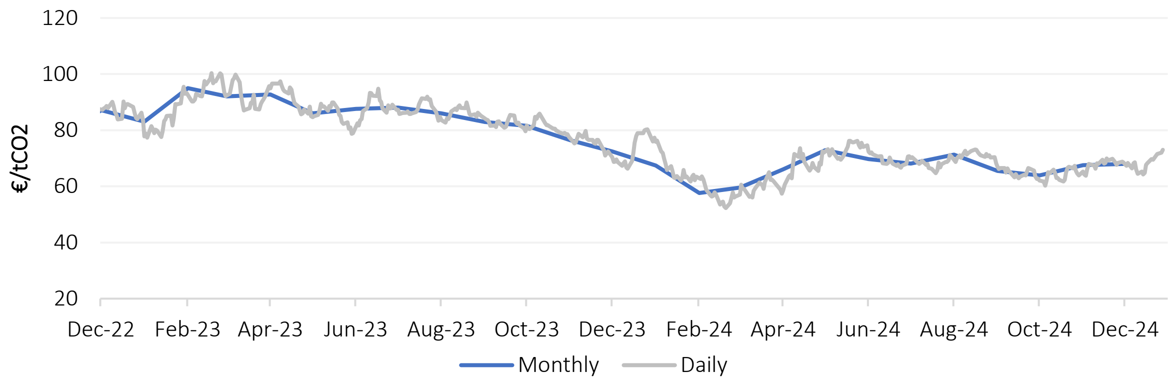


Source: GECF Secretariat based on data from Argus and Refinitiv Eikon
Note: Conversion factors of 23.79 and 21.81 were used to calculate the coal prices in $/MMBtu for Europe (API2) and China (QHG) respectively.

6.2.3 Carbon prices

In December 2024, EU carbon prices averaged €68.03/tCO_2, reflecting an increase of 1% m-o-m and a decrease of 6% y-o-y (Figure 125). This slight uptick was driven by increased demand for EUAs, spurred by colder temperatures across the region. By the end of the month, daily EU carbon prices reached a 4-month high of $73/t$CO_2$.

Figure 125: EU carbon prices

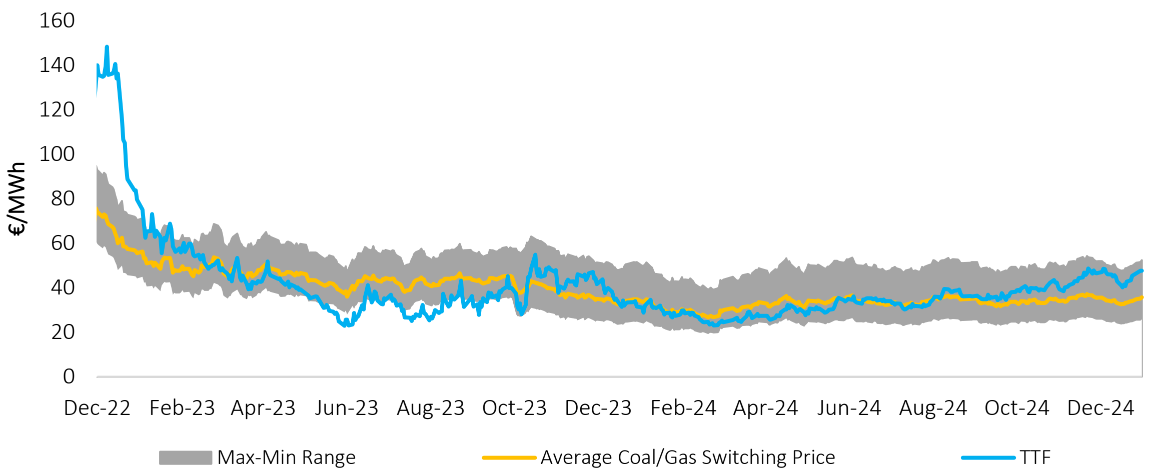


Source: GECF Secretariat based on data from Refinitiv Eikon

6.2.4 Fuel switching

In December 2024, daily TTF spot prices remained within the range that is favourable for coal-to-gas switching. However, it remained close to the upper limit of the switching range. Notably, the average monthly spread between the TTF spot price and the coal-to-gas switching price remained positive and increased to an average of €11/MWh (Figure 126). Looking ahead to February 2025, the TTF spot price is expected to remain within the coal-to-gas switching range but will likely stay above the average switching price. This elevated level may discourage coal-to-gas switching in the region.

Figure 126: 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, CO_2 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%.

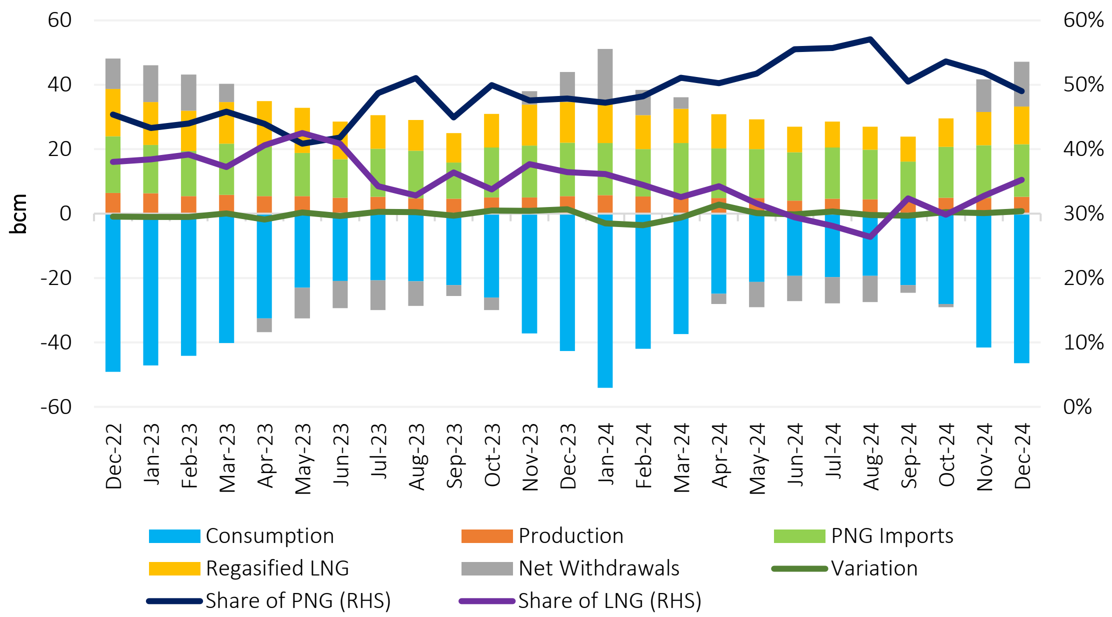
Annexes

Gas balance

1) EU + UK

In December 2024, regasified LNG constituted 35% of the EU and UK gas supply, up from 33% in November 2024 but slightly below 36% in December 2023. Conversely, pipeline gas imports accounted for 49%, down from 52% in the previous month but marginally higher than 48% a year earlier (Figure 127). The increase in regasified LNG's share, coupled with the decline in pipeline gas imports' share, was driven by a notable rise in regasified LNG send-out alongside a slight decrease in pipeline imports. In comparison to December 2023, the small decline in regasified LNG's share and the increase in pipeline imports were attributed to a smaller reduction in pipeline gas imports compared to the decrease in regasified LNG send-out.

Figure 127: 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 2 below provides data on the gas supply and demand balance for the EU + UK for the month of December 2024.

Table 2: EU + UK gas supply/demand balance for December 2024 (bcm)

	2023	Dec-23	Dec-24	12M 2023	12M 2024	Change* y-o-y	Change** 2024/2023
(a) Gas Consumption	377.73	42.64	46.40	377.73	376.15	9%	0%
(b) Gas Production	63.46	5.43	5.22	63.46	58.20	-4%	-8%
Difference (a) - (b)	314.27	37.21	41.18	314.27	317.95	11%	1%
PNG Imports	174.88	16.61	16.31	174.88	185.02	-2%	6%
Regasified LNG	143.59	12.64	11.73	143.59	114.99	-7%	-20%
Net Withdrawals	-4.86	9.28	13.89	-4.86	13.89	50%	-386%
Variation	0.66	-1.31	-0.75	0.66	4.05		

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

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

(**): y-o-y change for 12M 2024 compared to 12M 2023

2) OECD

Table 3 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 October 2024.

Table 3: OECD's gas supply/demand balance for October 2024 (bcm)

	2023	Oct-23	Oct-24	10M 2023	10M 2024	Change* y-o-y	Change** 2024/2023
(a) OECD Gas Consumption	1771.6	132.0	132.4	1432.6	1431.6	0.3%	-0.1%
(b) OECD Gas Production	1699.6	144.3	142.9	1408.5	1409.4	-1.0%	0.1%
Difference (a) - (b)	72.0	-12.3	-10.5	24.1	22.2	-14.9%	-8.0%
OECD LNG Imports	329.9	25.1	24.5	269.6	246.1	-2.7%	-8.7%
LNG Imports from GECF	140.8	10.8	10.9	116.1	103.7	0.8%	-10.6%
LNG Imports from Non-GECF	189.1	14.3	13.5	153.5	142.4	-5.4%	-7.2%
OECD LNG Exports	238.4	20.3	20.5	195.6	199.3	1.0%	1.9%
Intra-OECD LNG Trade	154.9	12.1	10.7	125.5	114.5	-11.0%	-8.7%
OECD Pipeline Gas Imports	497.4	39.0	39.7	411.2	404.4	1.7%	-1.7%
OECD Pipeline Gas Exports	479.8	38.4	37.7	399.4	387.2	-1.6%	-3.0%
Stock Changes and losses	37.1	17.8	16.4	61.8	41.9		

Source: GECF Secretariat based on data from ICIS LNG Edge and IEA Monthly Gas Statistics

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

(**): y-o-y change for 10M 2024 compared to 10M 2023

3) India

Table 4 below provides data on the gas supply and demand balance for India for the month of November 2024.

Table 4: India's gas supply/demand balance for November 2024 (bcm)

	2023	Nov-23	Nov-24	11M 2023	11M 2024	Change* y-o-y	Change** 2024/2023
(a) India Gas Consumption	62.15	5.41	5.88	58.78	62.57	8.7%	6.4%
(b) India Gas Production	35.09	2.99	2.94	32.01	32.92	-1.8%	2.8%
Difference (a) - (b)	27.06	2.42	2.94	26.78	29.65	21.7%	10.7%
India LNG Imports	30.27	2.64	2.95	27.60	33.83	11.4%	22.6%
LNG Imports from GECF	23.57	2.18	1.97	21.68	24.08	-9.8%	11.1%
LNG Imports from Non-GECF	6.70	0.46	0.97	5.93	9.75	112.6%	64.5%
Stock Changes and losses	3.21	0.23	0.00	0.83	4.18		

Source: GECF Secretariat based on data from ICIS LNG Edge and India's PPAC

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

(**): y-o-y change for 11M 2024 compared to 11M 2023

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
LPR	Loan Prime Rate
LT	Long-term
MMBtu	Million British thermal units
mcm	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
PSV	Punto di Scambio Virtuale (Virtual Trading Point in Italy)
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
TEU	Twenty-foot equivalent unit
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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