GECF

Gas Exporting Countries Forum

MONTHLY GAS MARKET REPORT

JUNE 2024

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About GECF

The Gas Exporting Countries Forum (GECF) is an intergovernmental organisation gathering the world's leading gas producers and exporters, whose objective is to provide a framework for the exchange of views, experiences, information and data, while developing the cooperation and collaboration amongst its members in gas-related matters. The GECF gathers 20 countries, including 12 full members and 8 observer members (GECF Member Countries) from four continents. Algeria, Bolivia, Egypt, Equatorial Guinea, Iran, Libya, Nigeria, Qatar, Russia, Trinidad and Tobago, United Arab Emirates and Venezuela have the status of full members, while Angola, Azerbaijan, Iraq, Malaysia, Mauritania, Mozambique, Peru and Senegal have the status of observer members.

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

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Highlights

Global economy: Global GDP growth for 2024, based on purchasing power parity, is projected by Oxford Economics to be 3.0%. Despite downside risks, steady growth in H1 2024 and more accommodative monetary policies in H2 2024 are expected to support overall economic expansion. On a regional level, GDP growth is expected to reach 2.4% in the US, 0.8% in the Euro area, and 4.7% in China. Looking ahead to 2025, global economic growth is expected to accelerate slightly, with a forecasted global GDP growth of 3.3%. Additionally, global inflation is anticipated to continue its downward trend, reaching an annual average of 4.6% in 2024 and 3.4% in 2025.

Gas consumption: In May 2024, gas consumption in the EU witnessed a significant y-o-y decrease of 6%, primarily due to increased power outputs from hydro, solar and nuclear sources. In addition, gas consumption in the industrial sector showed a slight recovery in major industrialized European countries. The US gas consumption increased by 1.7% y-o-y to stand at 66 bcm, driven by the power generation sector. In April 2024, China's apparent gas demand rose by 8.5% y-o-y to reach 34 bcm, with China's state company CNOOC forecasting domestic gas consumption to increase to 410 bcm in 2024.

Gas production: In May 2024, US shale gas production rose by 1% y-o-y to reach 87.4 bcm, despite the announced production cuts amidst low Henry Hub gas prices. Europe's gas production continued its annual decline to stand at 15.7 bcm in April 2024, mainly driven by continuous reductions in British and Dutch production, and despite the ramp up of the Norwegian output. In Asia, China maintained its gas production growth, with a sustained 4.8% y-o-y uptick, driven by the significant rise in coal bed methane output. Additionally, in May 2024, the global number of gas drilling rigs declined by 17 units m-o-m to stand at 355 rigs.

Gas trade: In May 2024, global LNG imports decreased by 3.9% (1.34 Mt) y-o-y to 33.1 Mt. In Europe, weaker LNG imports were driven by lower gas consumption, high gas storage levels, and significant price spread between spot LNG prices in the Asia Pacific and Europe. In addition, pipeline gas imports to the EU reached 13.6 bcm, remaining within the same stable range of the recent months. In the Asia Pacific region, conversely, strong LNG imports growth was driven by higher gas demand for cooling because of heatwaves, summer restocking, increased demand in new markets and attractive spot LNG prices.

Gas storage: The season of net gas injections into storage continues in Europe and North America. In the EU, the average volume of gas in storage in May 2024 increased to 68.5 bcm, or 66% capacity gas storage levels. Similarly, in the US, the average gas storage level also increased, reaching 77.0 bcm, or 57% of the country's capacity. In both regions, the level of gas in storage is notably higher than the five-year historical average. In Asia, after falling in recent months, the combined volume of LNG in storage in Japan and South Korea increased to 14.4 bcm.

Energy prices: Gas and LNG spot prices in Europe and Asia experienced an increase for the third consecutive month. The average TTF spot price stood at $10.11/MMBtu, marking an 11% m-o-m increase. Similarly, the average NEA spot LNG price rose by 11% m-o-m to $10.81/MMBtu. Meanwhile, in the US, Henry Hub prices reversed the previous months' losses, reaching a four-month high, averaging $2.1/MMBtu. Ongoing geopolitical instability and outages at several LNG facilities drove the bullish trend. Looking forward, spot prices are likely to be supported by increasing demand from buyers in South and Southeast Asia.

Feature Article: Senegal, an emerging LNG exporter

The application of the Republic of Senegal to be an observer member in the GECF was unanimously approved at the 7th GECF Summit held on 2 March 2024, in Algiers. Senegal's membership highlights that more and more countries across the world share the GECF vision to make natural gas the pivotal resource for inclusive and sustainable development, and to ensure energy security, affordability, and sustainability.

In the spirit of strengthening relationship between the GECF and Senegal, H.E. Birame Souleye Diop, Minister of Energy, Petroleum and Mining of Senegal met with H.E. Eng. Mohamed Hamel, Secretary General of the GECF on 3 June 2024 at the GECF headquarters in Doha, Qatar (Figure iii).

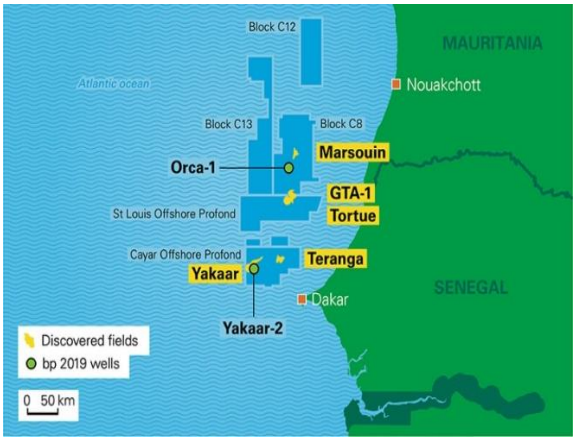
Historically, Senegal has been a relatively small gas market, with annual gas production and consumption averaging annually around 50 million cubic meters over the past two decades.

In April 2015, a major offshore gas discovery partly in Block C8 and partly in Bloc SLOP was announced, the Greater Tortue Ahmeyim (GTA) field. The gas accumulation located on the maritime border between Senegal and Mauritania is estimated to contain more than 400 bcm of potentially recoverable gas resources. In December 2018, the GTA project shareholders (BP, Kosmos Energy, Société des Pétroles du Sénégal /PETROSEN/ and Société Mauritanienne Des Hydrocarbures /SMH/), approved the Final Investment Decision (FID) for Phase 1 of this project (Figure i).

The GTA project will produce gas from an ultra-deepwater subsea system through floating production, storage and offloading (FPSO) vessel, which will act as a gas processing facility with a capacity of 5.2 bcma. Notably, May 2024 saw the arrival of the GTA FPSO, which is now moored 45 km offshore, marking the final step towards the production startup in Q4 2024.

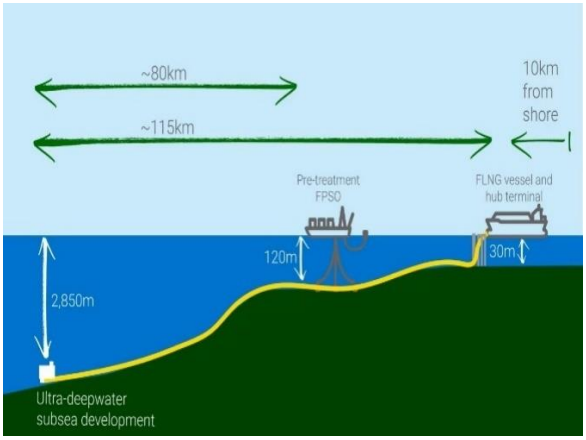
The produced gas will be transferred to a floating liquefied natural gas (FLNG) facility at a nearshore area (Figure ii). In February 2019, BP signed a 20-year lease and operating agreement with Golar LNG for the Gimi FLNG vessel, designated as the LNG production facility for the GTA Phase 1 LNG project. The Gimi FLNG vessel, with a capacity of 2.5 Mtpa, arrived at the project site in February 2024. By the commencement of first gas in Q4 2024, Senegal will join the club of LNG exporters.

Figure i: Senegal's natural gas fields



Source: Journal of Petroleum Technology

Figure ii: GTA project layout



Source: BP

Plans for expanding the GTA LNG project in the medium-term are underway. The GTA Phase 2 LNG project is expected to add 2.5-3 Mtpa of liquefaction capacity, with an FID anticipated in the short term. Discussions are currently ongoing with project partners and the governments of Senegal and Mauritania. Additionally, the GTA LNG project has the potential to expand further to 10 Mtpa in subsequent phases over the long term.

Senegal has even a greater potential to increase its share on the global gas market, with the development of other major projects, in particular in the Yakaar-Teranga (YT) area. The first exploration success was achieved there in 2016, and recoverable gas resources are estimated at around 600 bcm. Within this project, PETROSEN and its partner Kosmos are working closely with the Government of Senegal on an innovative development concept that prioritizes cost-competitive gas to the rapidly growing domestic market, combined with a liquefied natural gas (LNG) facility targeting exports into international markets.

The currently envisioned concept is an offshore development producing daily 18 million cubic meters of gas, with 4.3 million cubic meters of domestic gas per day transported via pipeline to shore and 3 Mtpa of export volumes liquefied on a floating LNG vessel. The concept is now being optimized to best meet the domestic and international requirements, after which the project will move into front-end design and engineering (FEED) in order to get a Final Investment Decision (FID) by end of first quarter of 2025 (Q1 2025). PETROSEN and Kosmos are looking forward to advancing the project with new partners (technical, financial and commercial) in a simplified and aligned relationship, increasing PETROSEN's expertise through knowledge and skills transfer, and providing economic, social, and environmental benefits to the people of Senegal.

With these upstream developments, Senegal will not only become a significant LNG exporter, but will also boost its domestic consumption. Gas demand is expected to robustly ramp up starting from 2024, driven by the start-up of gas production from the GTA project. Several major projects are set to be commissioned in the coming years. The first project is the construction of the gas-fired Cap des Biches combined-cycle power plant, with a capacity of 300 MW, scheduled to begin operations in 2024. Additionally, the planned conversion of the Sendou coal-fired power plant (125 MW capacity) and the Malicounda fuel oil-fired power plant (120 MW capacity) to run on natural gas will further boost domestic gas consumption. Moreover, in May 2024, the government of the Saint-Louis region announced plans to build a new gas-fired power plant with a capacity of 250 MW. These projects, aligned with Senegal's 2035 strategy for accelerating sustainable development and economic growth will increase gas consumption to meet the country's growing energy needs and contribute to its pursuit of greater energy independence and improved energy efficiency.

Despite all these significant advancements in gas projects, Senegal remains underexplored, presenting a substantial opportunity for further discoveries. Recent oil and gas findings, over the past decade, have confirmed the presence of significant reserves, highlighting the untapped potential within the two dozen available oilfield blocks. The political stability and commitment to economic growth provide a secure environment for long-term investments, making it a prime destination for oil and gas investors. The strategic location of the country further enhances its attractiveness as an investment destination.

Senegal, now the eighth African country to be a member of the GECF, faces challenges and opportunities like those of other African nations. In Africa, exploitation of natural gas resources may boost socio-economic development through exports revenues and industrialisation

opportunities in conjunction with other natural resources embedded by the continent. In particular, natural gas may foster rapid increase of access to electricity and LPG, and sharply reduce energy poverty while ensuring environmental protection. In the meantime, realising this potential requires significant investment in gas infrastructure, particularly intra-regional gas pipelines, to support domestic and regional gas consumption.

In this context, the Forum continues providing unwavering support for African countries in their resolute pursuit of developing their gas resources. At the 7th GECF Summit, held on March 2, 2024 in Algeria, the Heads of State and Government of the GECF Member Countries expressed their "strong support for African countries in their aspirations and commendable endeavours to tackle energy poverty, address the challenges related to energy access and foster sustainable, equitable and inclusive socio-economic development while protecting the environment, in line with the United Nations 2030 Development Agenda and the African Union's Agenda 2063."

Furthermore, the GECF held its inaugural workshop themed "Natural Gas for Africa" on May 30, 2024, in commemoration of Africa Day. H.E. Eng. Mohamed Hamel, Secretary General of the GECF, highlighted the vast potential of the continent's natural resources to ensure energy and food security (Figure iv). In his opening remarks, he stated, "Available, clean, affordable, flexible and versatile, natural gas emerges as the fuel of choice for Africa … The share of natural gas in the African energy mix increased from 10% in 2000 to a significant 16% in 2022, and is projected to steadily rise to 21% in 2050. The demand is expected to reach 400 billion cubic meters, a significant increase from the level of 165 bcm in 2022."

The GECF extends its warmest wishes for success to its new member, the Republic of Senegal.

Figure iii: Meeting of H.E. Mohamed Hamel and H.E. Birame Souleye Diop on June 3, 2024

Source: GECF Secretariat

Figure iv: GECF Workshop on "Natural Gas for Africa on May 30, 2024

Source: GECF Secretariat

1 Global Perspectives

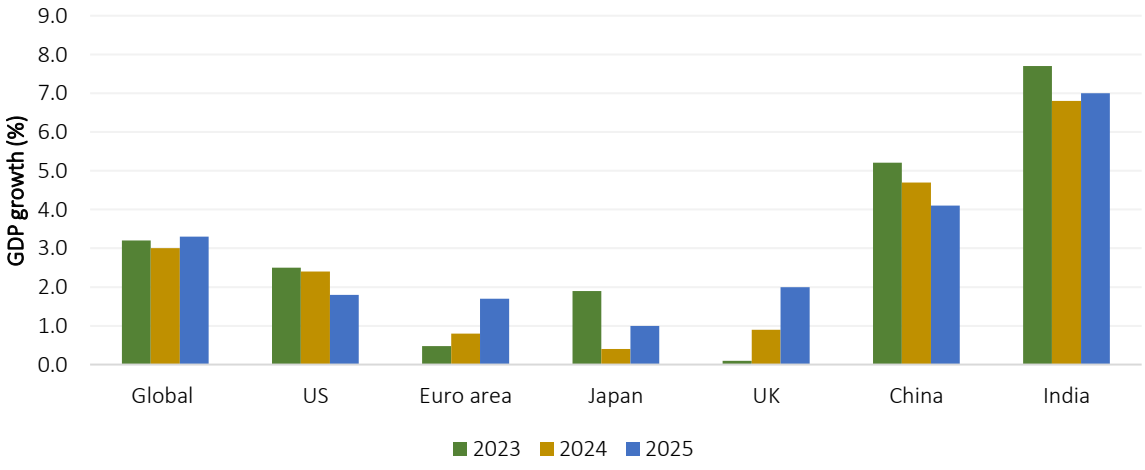
1.1 Global economy

As of June 2024, Oxford Economics has maintained its forecast for global GDP growth for 2024 at 3.0%, based on the purchasing power parity method. In the US, the GDP growth forecast has been revised downward by 0.2 percentage points to 2.4%, reflecting a downward revision to GDP growth in Q1 2024. Although the US economy remains resilient, growth is expected to be weaker than anticipated in Q2 2024. In the Euro area, the GDP growth forecast has been maintained at 0.8%. Economic growth in the Euro area was concentrated in the largest economies in Q1 2024. In Q2 2024, economic activity was supported by easing inflation and continued recovery in the industrial sector. The GDP growth forecast for China has remained unchanged from the previous month at 4.7%. In China, the strong performance of the industrial sector witnessed in Q1 2024, has continued into Q2 2024. However, economic fundamentals remain weak. Meanwhile, in India, the GDP growth forecast has been revised upward by 0.5 percentage points to 6.8%.

Furthermore, the Organization of Petroleum Exporting Countries (OPEC) has maintained its forecast for global GDP growth for 2024 at 2.8%. Despite downside risks, steady growth in H1 2024 and more accommodative monetary policies in H2 2024 are expected to support overall economic growth. Additionally, the Organization for Economic Co-operation and Development (OECD), in its Economic Outlook May 2024, revised its previous global GDP growth forecast for 2024 upwards by 0.2 percentage points to 3.1%. Similarly, the OECD expects modest global growth, with softer growth in some advanced economies being offset by stronger growth in the US and other emerging markets.

Looking ahead to 2025, the global GDP growth estimated was maintained at 3.3% by Oxford Economics. In the US, economic growth is expected to decelerate; with the GDP growth forecast revised downward by 0.1 percentage points to 1.8%. In the Euro area, the GDP growth forecast has also been revised downward by 0.1 percentage points to 1.7% for 2025. Additionally, for China, the GDP growth forecast of 4.1% has been maintained. Meanwhile, in India, GDP growth forecast was revised downward by 0.4 percentage points to 7% (Figure 1).

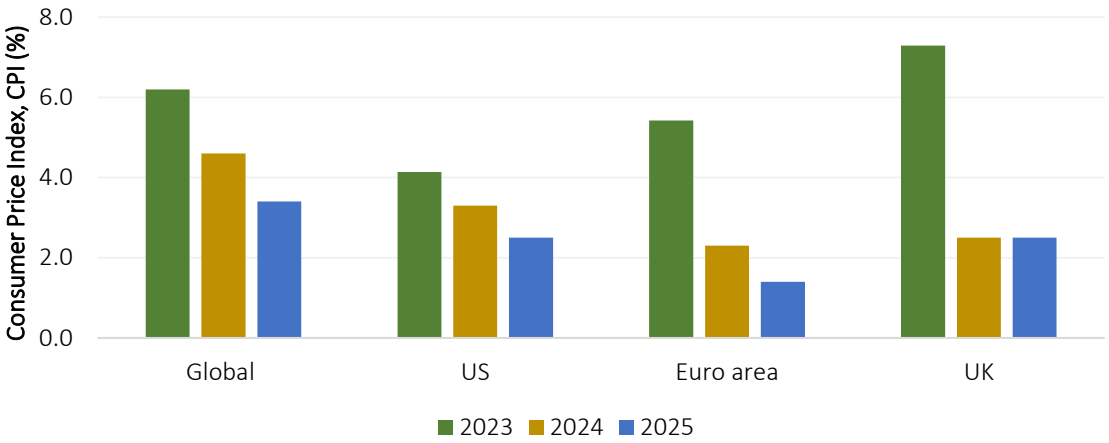
Figure 1: GDP growth



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

Global inflation is expected to average 4.6% in 2024, declining from 6.2% in 2023, according to Oxford Economics. Furthermore, in 2025, global inflation is projected to fall to 3.4%. In the Euro area, inflation is projected to fall to 2.3% in 2024 and 1.4% in 2025. In the UK, inflation is expected to be 2.5% in both 2024 and 2025. In the US, inflation is expected to decline to 3.3% in 2024 and 2.5% in 2025 (Figure 2).

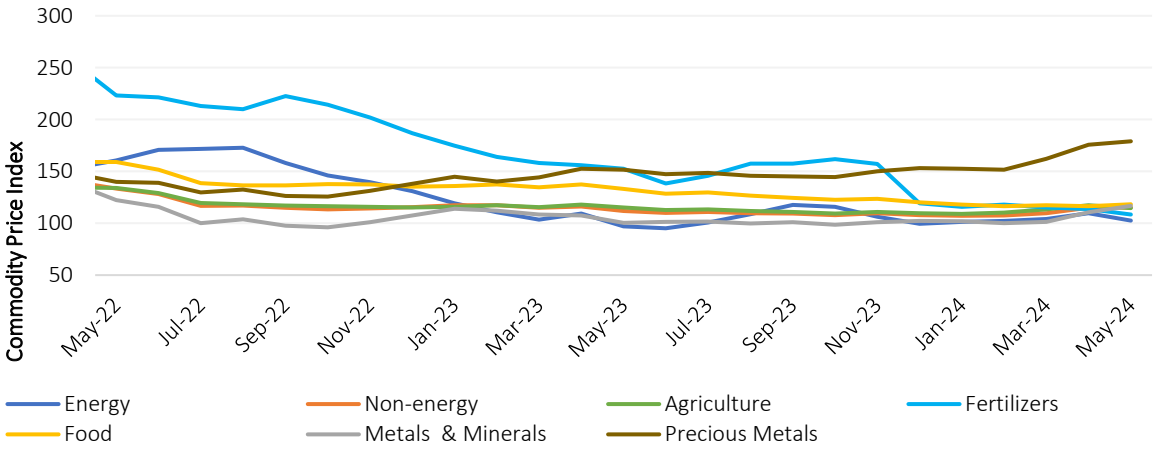
Figure 2: Inflation rates



Source: GECF Secretariat based on data from Oxford Economics

In May 2024, commodity prices in the energy sector declined following four consecutive monthly increases. The energy price index experienced a decrease of 6% m-o-m, but remained 6% higher y-o-y. Lower oil prices during the month contributed to this decline. Additionally, the non-energy price index remained at the same level as the previous month, but reflected a 3% increase y-o-y. Substantial increases in the metals and minerals, and precious metals indices supported the non-energy price index. Meanwhile, the fertilizer price index reflected a 5% decline m-o-m, and was 29% lower y-o-y (Figure 3).

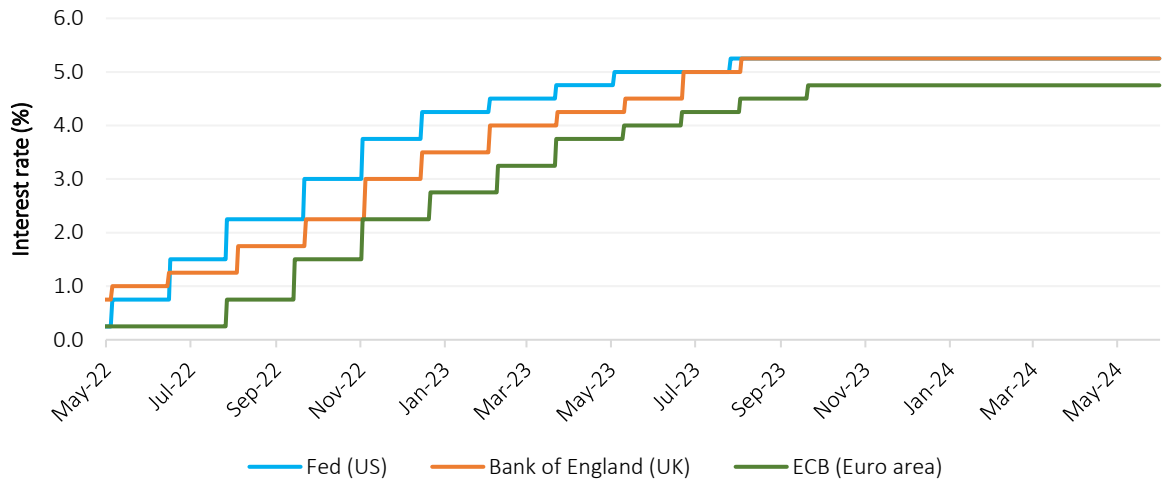
Figure 3: Monthly commodity price indices



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

In May 2024, the US Federal Reserve (Fed) maintained its benchmark interest rate within the range of 5.25% to 5.50%. The Fed's last rate hike occurred in July 2023 (Figure 4). Similarly, the Bank of England (BOE) kept its key interest rate at 5.25%, following its last increase in August 2023. However, on June 6, 2024, the European Central Bank (ECB) decided to lower its key interest rates by 0.25 percentage points, based on its assessment of inflation trends. Accordingly, the main refinancing operations, marginal lending facility and deposit facility rates have been lowered to 4.25%, 4.5% and 3.75%, respectively, effective from June 12, 2024.

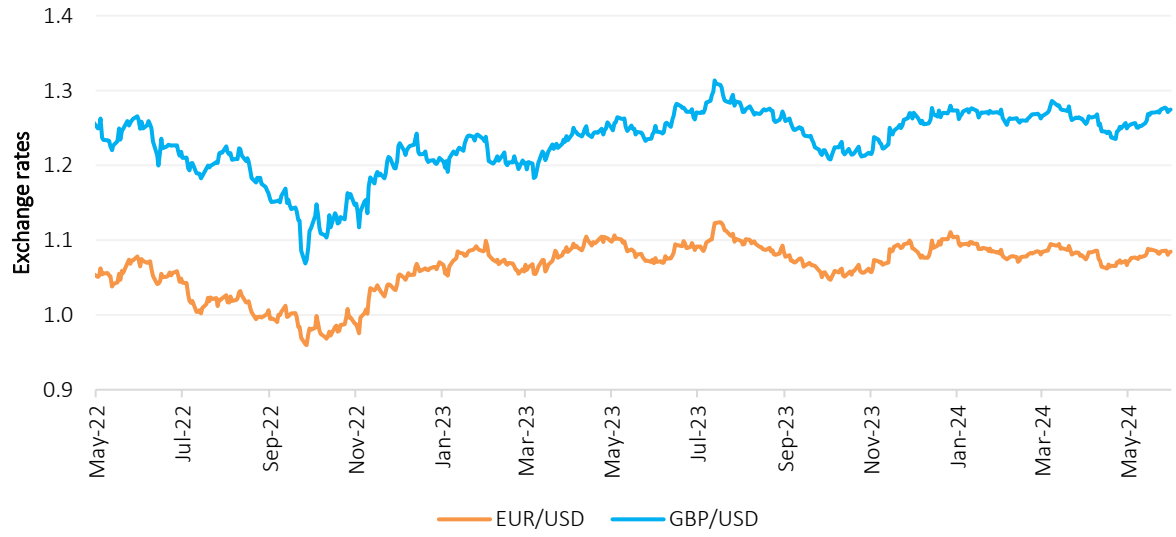
Figure 4: Interest rates in major central banks



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

In May 2024, the euro appreciated slightly against the US dollar, resulting in an average exchange rate of $1.0812. This represented an increase of 1% m-o-m and a slight decrease of 0.5% y-o-y. Similarly, the British pound also appreciated against the US dollar, as the average exchange rate reached $1.2642 reflecting increases of 1% m-o-m and y-o-y (Figure 5).

Figure 5: Exchange rates



Source: GECF Secretariat based on data from Refinitiv Eikon

1.2 Other developments

G7: The G7 Finance Ministers and Central Bank Governors' meeting took place on May 23-25, 2024 in Stresa, Italy. The Heads of the International Monetary Fund (IMF), World Bank Group (WBG), Organisation for Economic Cooperation and Development (OECD) and Financial Stability Board (FSB) also attended the meeting. Notably, as stated in the Communiqué, the leaders reiterated their "support for the Alliance for Green Infrastructure in Africa (AGIA) as an innovative financial mechanism of AfDB in partnership with the African Union, Africa50 and other development partners, aimed at mobilizing blended capital to design and develop a USD 10 billion bankable portfolio of transformative green infrastructure projects on the continent. The goal is to accelerate the energy transition, bridge the long-standing infrastructure gap and promote climate resilience."

Summit on Clean Cooking in Africa: The inaugural high-level Summit on Clean Cooking in Africa was held on May 14, 2024 in Paris, France. Notably, more than 100 countries, international institutions, companies and civil society organisations endorsed The Clean Cooking Declaration, in which they "pledged to make clean cooking a priority and enhance efforts toward achieving universal access for all, recognising its essential role in achieving Sustainable Development Goal 7." In his address, the President of the African Development Bank Group, Dr Akinwumi A. Adesina stated as follows, "We are delighted to play a leading role … to definitively tackle lack of access to clean cooking, that affects a billion people in Africa. In concert with countries, we will increase our financing for clean cooking to USD 200 million annually over the next decade, while also scaling-up the provision of blended finance for clean cooking through the Sustainable Energy Fund for Africa (SEFA)."

EU electricity market reform: The Council of the EU adopted the reform of the electricity market design on May 21, 2024. The revisions to key EU legislative acts governing the electricity market were previously proposed by the European Commission (EC) on March 14, 2023. The reform aims to strengthen the structure of the electricity market to make it more resilient to any future energy crises. Accordingly, it includes measures aimed at protecting consumers from price spikes and volatility, enhancing the integration of renewable energy sources into the energy system, and improving the stability and predictability of energy costs.

EU regulation on methane emissions reduction: The first-ever EU regulation on methane emissions reduction was adopted on May 27, 2024. As part of the EU Methane Strategy, this regulation aims to halt the avoidable release of methane into the atmosphere and minimize methane leaks from energy companies operating within the EU. It mandates the measurement, reporting and verification of methane emissions from coal, oil and gas exploration and production, as well as distribution and underground storage, including LNG. Starting in 2030, the EU will impose a maximum methane intensity value for fossil fuels produced and imported by member states. Accordingly, all producers and importers will be required to demonstrate that the methane intensity of the production of hydrocarbons imported into the EU is below the maximum value set by the European Commission.

St. Petersburg International Economic Forum (SPIEF): The 27th SPIEF took place on June 5-8, 2024 in St. Petersburg, Russia. In his keynote speech of the energy panel, Igor Sechin, Chief Executive Officer of Rosneft highlighted that, "huge investments made over the past decades in the development of alternative energy sources have not led to the displacement of fossil fuels from the energy market, and the green transition strategy in its current form cannot ensure the sufficiency, availability and reliability of energy sources."

2 Gas Consumption

2.1 Europe

2.1.1 European Union

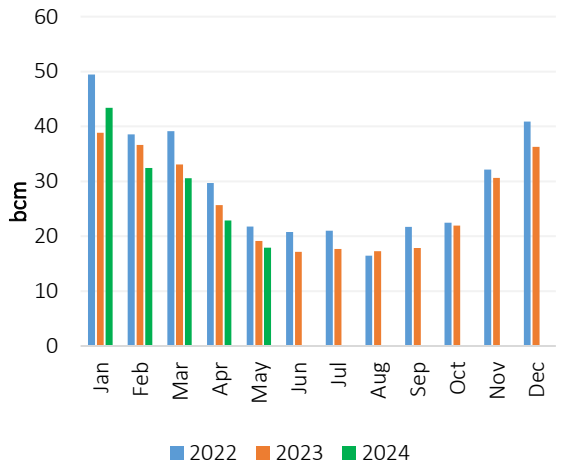
In May 2024, gas consumption in the EU recorded a significant year-on-year decrease of 6%, which was mainly driven by the continuous implementation of the gas demand reduction measures (Figure 6).

In the residential sector, gas consumption for heating dropped in some countries, since the region witnessed unusually warm weather. May 2024 was the third warmest May on record for Europe, with an average temperature 0.88°C above the 1991-2020 average. Northern regions experienced the most significant warmth, while temperatures were below average in parts of South-western and South-eastern Europe. Additionally, spring 2024 (March-May) set a new record as the warmest European spring, averaging 1.50°C above the 1991-2020 seasonal norm and 0.36°C warmer than the previous record in 2014. Central and Eastern Europe, along with parts of the Scandinavian countries, saw the highest temperature anomalies, as stated by the Copernicus Climate Change Service/ECMWF.

In the industrial sector, gas consumption showed a recovery in major industrialized European countries, driven by the fall in gas prices.

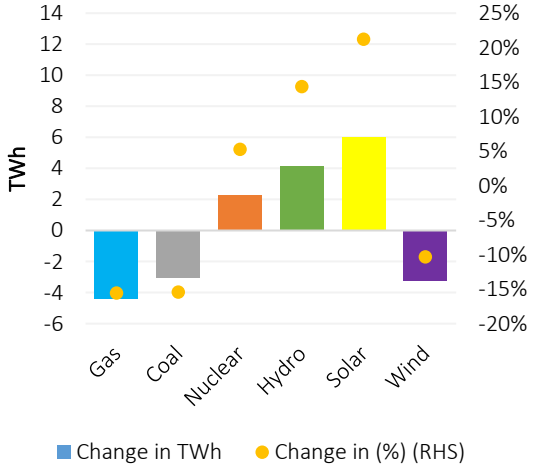
In the power generation, gas consumption experienced a 16% y-o-y decline, while total electricity production rose by 1.2% y-o-y, reaching 191 TWh. This significant decrease in gas consumption within the power sector can be attributed to increased outputs from hydro, solar and nuclear. Conversely, electricity generated from coal and wind also witnessed a decline (Figure 7). Within the current power mix, non-hydro renewables held the largest share at 37%, followed by nuclear at 24%, hydro at 17%, gas at 13%, and coal at 9%.

Figure 6: Gas consumption in the EU



Source: GECF Secretariat based on data from Entsog and Refinitiv

Figure 7: Trend in electricity production in the EU in May 2024 (y-o-y change)



Source: GECF Secretariat based on data from Ember

For the period January to May 2024, EU's overall gas consumption declined by 4.1% y-o-y to reach 147 bcm.

2.1.1.1 Germany

In May 2024, Germany experienced a 4% y-o-y reduction in gas consumption, with usage dropping to 4.3 bcm (Figure 8). A significant decline was observed in the residential sector driven by warmer weather during the month. Germany's average temperature was 14.8°C, exceeding the usual average by 1.84°C. Notably, spring 2024 in Germany recorded an unprecedented temperature anomaly of +1.72°C, making it the warmest spring in history. In contrast, gas consumption in the power generation and industrial sectors increased by 1% and 8%, respectively (Figure 9). This increase was mainly due to the shutdown of several coal-fired power plants in the country and the recovery in the industrial sector following the slowdown in gas prices.

Figure 8: Gas consumption in Germany

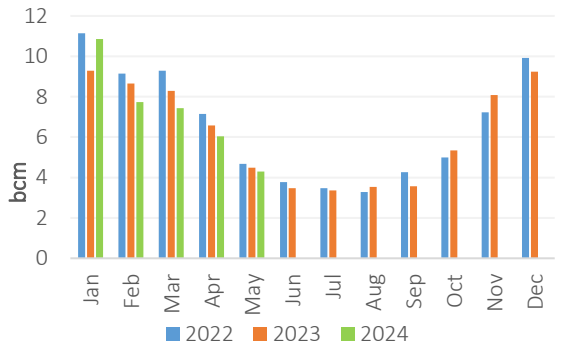
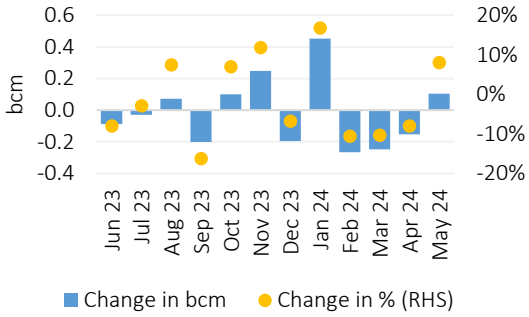


Figure 9: Trend in gas consumption in the industrial sector in Germany (y-o-y change)



Source: GECF Secretariat based on data from Refinitiv

Gas-fired power generation saw a slight y-o-y increase of 1%, while overall electricity production dropped by 2.3%, totalling 34 TWh. Notably, electricity production from coal decreased by 17% due to the closure of seven coal-fired power plants during Easter, marking a significant advancement in the nation's transition away from coal. Conversely, solar energy generation experienced substantial increases, driven by favourable weather conditions (Figure 10). In the electricity mix, non-hydro renewables led with a 60% share, followed by coal and gas at 18% and 15% each and hydro by 7% (Figure 11).

Figure 10: Trend in electricity production in Germany in May 2024 (y-o-y change)

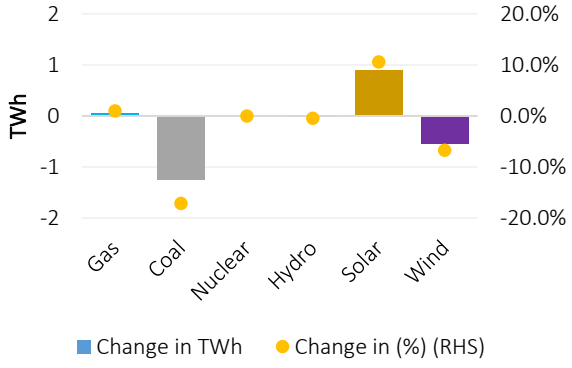
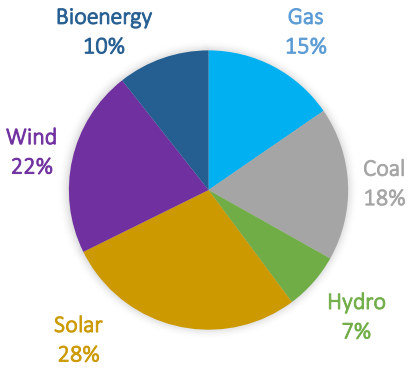


Figure 11: German electricity mix in May 2024



Source: GECF Secretariat based on data from Refinitiv and Ember

In the first five months of 2024, Germany's overall gas consumption decreased by 2.5% y-o-y to reach 36.4 bcm.

2.1.1.2 Italy

In May 2024, Italy's gas consumption decreased by 9.5% y-o-y to total 3.5 bcm (Figure 12). This decline was primarily due to reduced consumption in the power generation sector, largely influenced by increased renewables output. The residential sector saw a 1.1% decrease in consumption, dropping to 1.2 bcm, which was driven by the country's mild weather. Italy experienced a contrast in weather conditions: the central and southern regions were warm and dry, while the northern regions were cool and rainy. Temperature anomalies varied mostly between -1°C and +1°C across the country. In the industrial sector, gas consumption declined by 0.5% y-o-y to 1 bcm after two consecutive months of growth (Figure 13).

Figure 12: Gas consumption in Italy

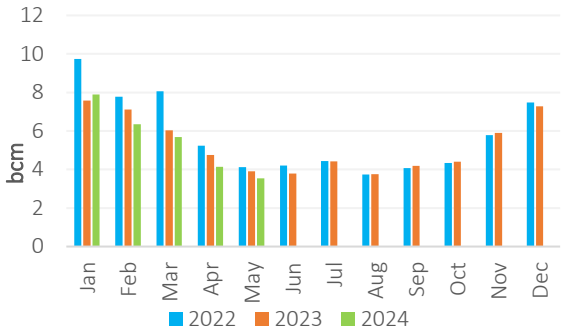
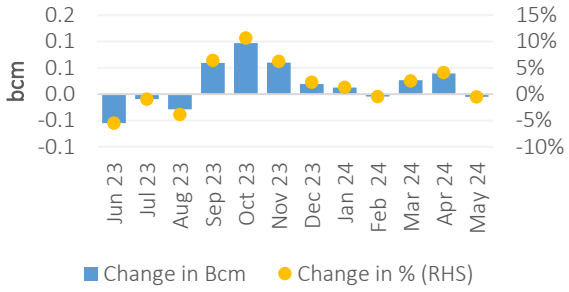


Figure 13: Trend in gas consumption in the industrial sector in Italy (y-o-y change)



Source: GECF Secretariat based on data from Snam

Gas-based electricity production declined by 18% y-o-y to 1.2 bcm, while total electricity production increased by 4.2% y-o-y, reaching 18.4 TWh. Notably, there was a significant y-o-y increase in energy generation from non-hydro renewables (wind + solar) by 31%, which reduced the role of natural gas in the power generation mix (Figure 14). Meanwhile, non-hydro renewables became the dominant fuel in the power mix with 38% of the share followed by gas with 33% (Figure 15).

Figure 14: Trend in electricity production in Italy in May 2024 (y-o-y change)

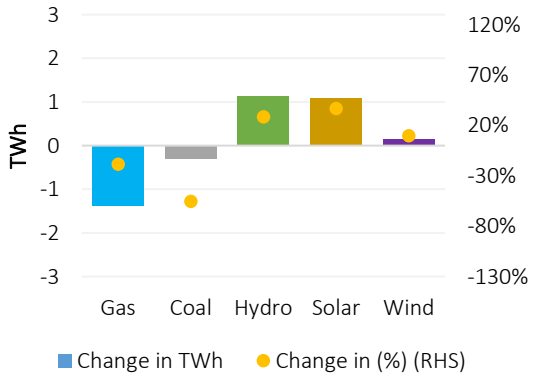
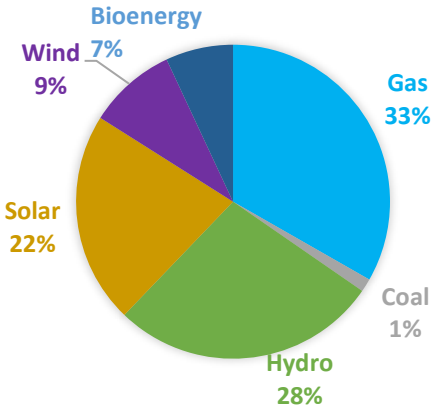


Figure 15: Italian electricity mix in May 2024



Source: GECF Secretariat based on data from Refinitiv and Ember

In the first 5 months of 2024, Italy's overall gas consumption decreased by 6% y-o-y to reach 27.6 bcm.

2.1.1.3 France

In May 2024, France experienced a fourth consecutive monthly decline in gas consumption, with a drop by 2.9% y-o-y to 1.7 bcm (Figure 16). The primary driver of this decline was the power generation sector, which recorded higher output from nuclear and hydro sources. In contrast, gas consumption in the residential sector increased by 7% y-o-y, despite France experiencing a temperature anomaly of +0.1°C above normal in May, and +0.8°C for the entire spring. Notably, this marked the 28th consecutive month of above-average temperatures in the country. Meanwhile, the industrial sector recorded a second consecutive month of growth, May exhibiting 6% y-o-y, with consumption totalling 0.7 bcm (Figure 17).

Figure 16: Gas consumption in France

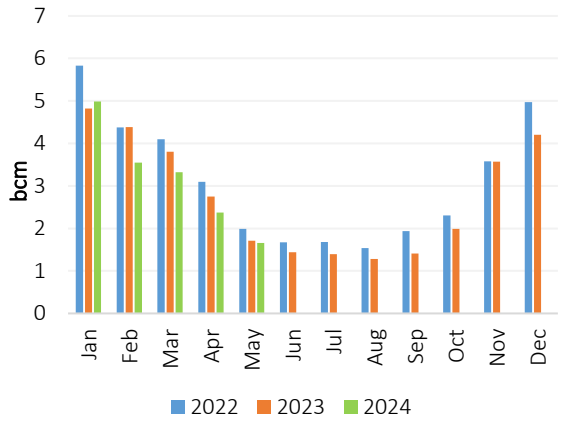
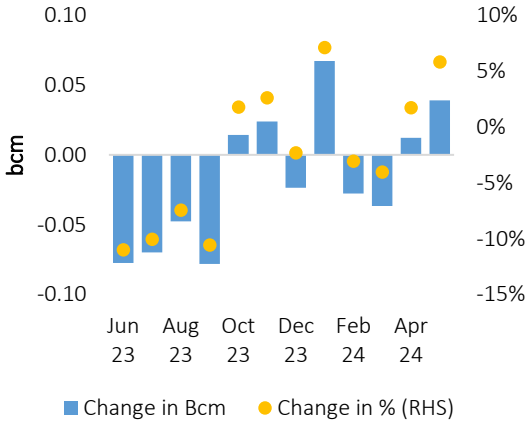


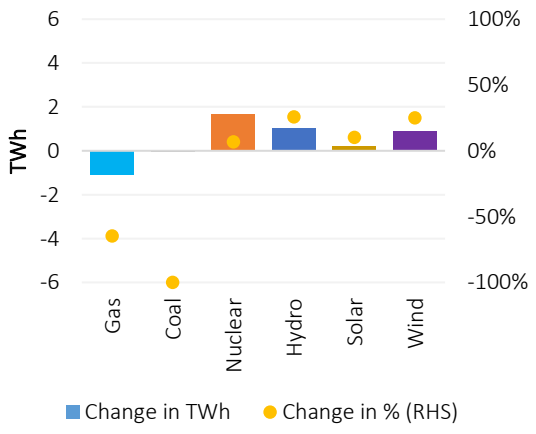
Figure 17: Trend in gas consumption in the industrial sector in France (y-o-y change)



Source: GECF Secretariat based on data from GRTgaz

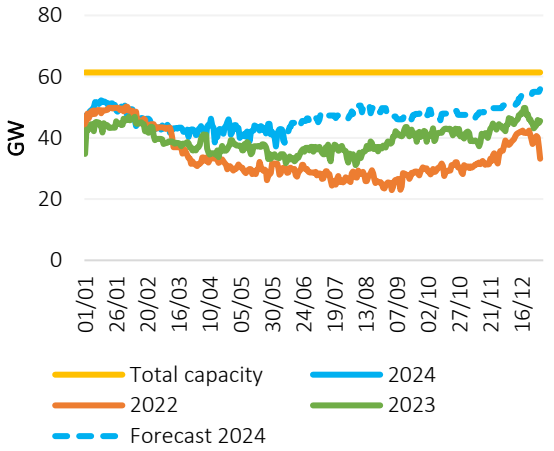
Electricity production from gas in France dropped by 66% y-o-y, while the country's total electricity production rose by 6.7% y-o-y to reach 40 TWh. Conversely, electricity production from hydro, wind and nuclear witnessed substantial increases (Figure 18). The availability of nuclear capacity increased by 16% y-o-y and 2% m-o-m (Figure 19). In France's electricity mix, nuclear power continued to be the dominant source, accounting for a 69% share, followed by hydro (17%), non-hydro renewables (13%) and gas (1%).

Figure 18: Trend in electricity production in France in May 2024 (y-o-y change)



Source: GECF Secretariat based on data from Ember

Figure 19: French nuclear capacity availability



Source: GECF Secretariat based on Refinitiv and RTE

In the first 5 months of 2024, France's gas consumption dropped by 9% y-o-y to reach 16 bcm.

2.1.1.4 Spain

In May 2024, Spain's gas consumption decreased by 8.4% y-o-y to reach 2 bcm (Figure 20). The decrease mainly stemmed from less gas use in both the power generation and residential sectors. A significant rise in hydroelectric and solar production led to a continued decrease in the power sector's gas demand. Meanwhile, the residential sector's gas consumption dropped notably due to warmer weather, with Spain recording an average monthly temperature of 15.7°C, which is 0.1°C above the norm. Conversely, industrial sector consumption recorded a growth of 3% y-o-y, fuelled by higher gas usage across several industries (Figure 21).

Figure 20: Gas consumption in Spain

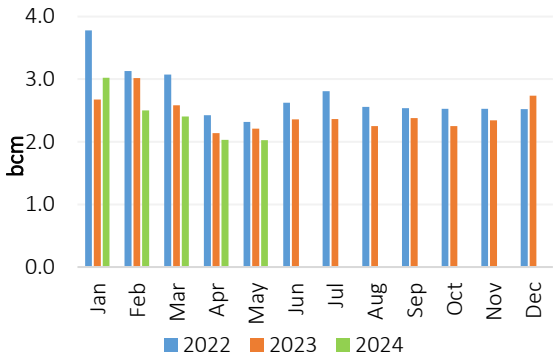
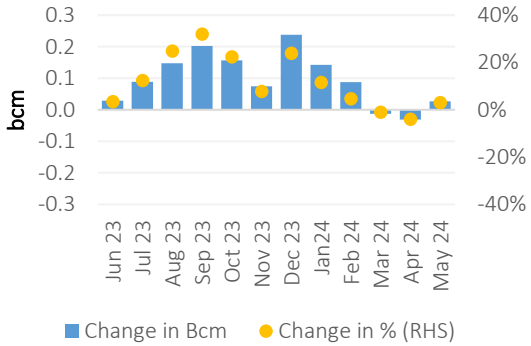


Figure 21: Trend in gas consumption in the industrial sector in Spain (y-o-y change)



Source: GECF Secretariat based on data from Enagas

Electricity generation from gas experienced a 39% y-o-y decrease, while the overall electricity production in the country declined by 1% y-o-y to 19 TWh. Additionally, there were notable reductions in electricity production from coal, nuclear and wind sources. In contrast, a significant increase in electricity generation from hydro was observed (Figure 22). The central and southern regions experienced dry conditions, while the northern areas, particularly Galicia in the northwest, saw significant rainfalls. Non-hydro renewables maintained the dominant position in the power mix, accounting for 53%, while natural gas represented 13% (Figure 23).

Figure 22: Trend in electricity production in Spain in May 2024 (y-o-y change)

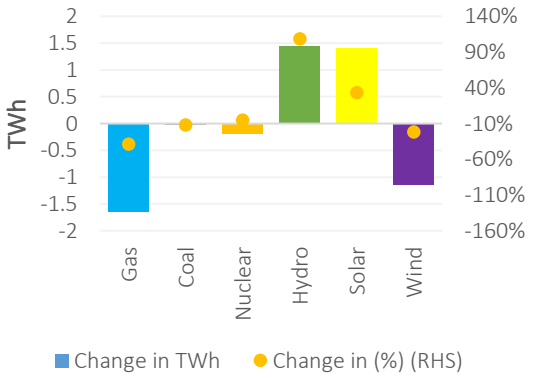
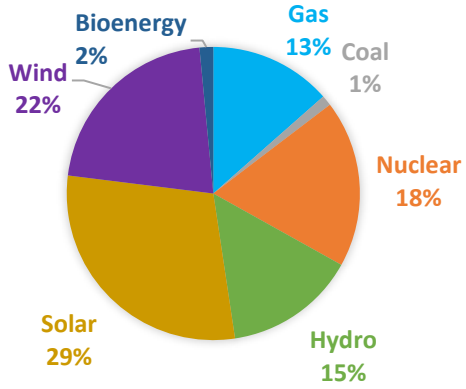


Figure 23: Spanish electricity mix in May 2024



Source: GECF Secretariat based on data from Ember and Ree

In the first 5 months of 2024, Spain's gas consumption decreased by 5% y-o-y to reach 12 bcm.

2.1.2 United Kingdom

In May 2024, the UK recorded its fourth consecutive month of declining gas consumption, which dropped by 9% y-o-y to 3.2 bcm (Figure 24). This reduction was primarily driven by a decline in the power generation sector amidst strong hydro output. Additionally, the industrial sector experienced a 3.9% decline (Figure 25). In contrast, the residential sector witnessed a slight increase of 0.2%, influenced by cooler weather on some days during the month, even though May 2024 and spring 2024 were the warmest on record in the United Kingdom. The average temperature in May was 13.1°C, which is 2.4°C above normal. For the entire spring period, the average temperature was 9.37°C, exceeding the norm by 1.30°C.

Figure 24: Gas consumption in the UK

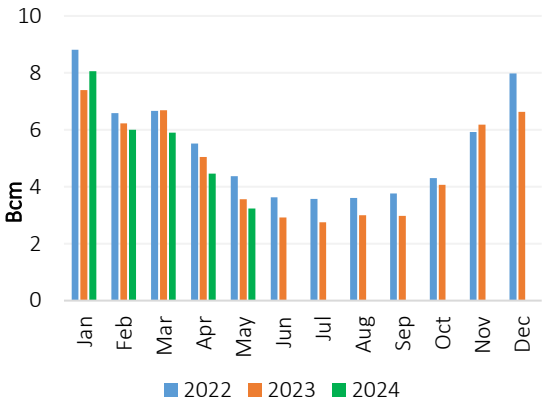
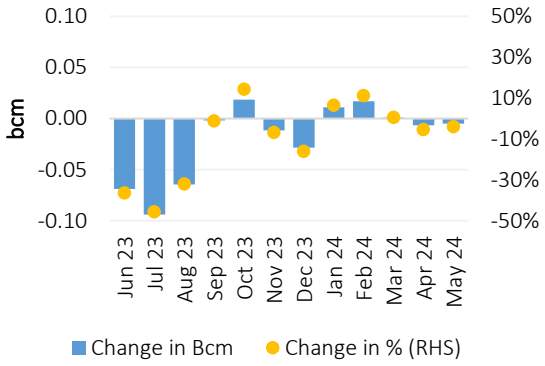


Figure 25: Trend in gas consumption in the industrial sector in the UK (y-o-y change)



Source: GECF Secretariat based on data from Refinitiv

Electricity production from gas witnessed a 25% y-o-y decrease, while total electricity production dropped by 11% y-o-y to 15 TWh. Electricity generation from hydro and nuclear energy saw significant increases. It is worth mentioning that the decline in gas consumption in the electricity sector occurred despite a reduction in wind and solar electricity production during the month (Figure 26). In the power mix, non-hydro renewables took the lead with 38% of the total electricity production, followed by gas at 36% (Figure 27).

Figure 26: Trend in electricity production in UK in May 2024 (y-o-y change)

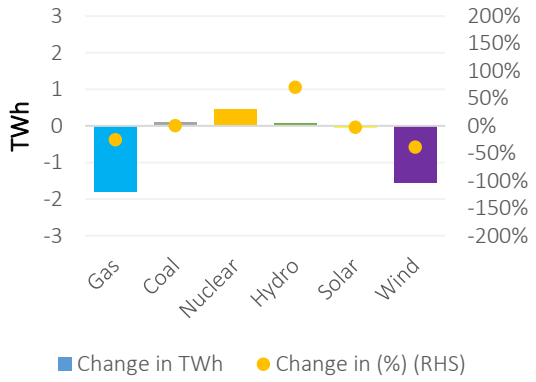
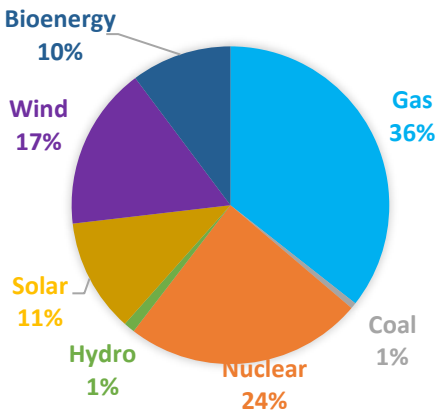


Figure 27: UK electricity mix in May 2024



Source: GECF Secretariat based on data from Refinitiv

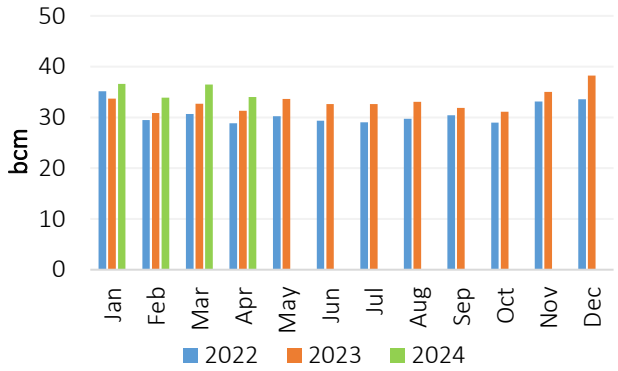
In the first 5 months of 2024, the UK's gas consumption dropped by 4% y-o-y to reach 28 bcm.

2.2 Asia

2.2.1 China

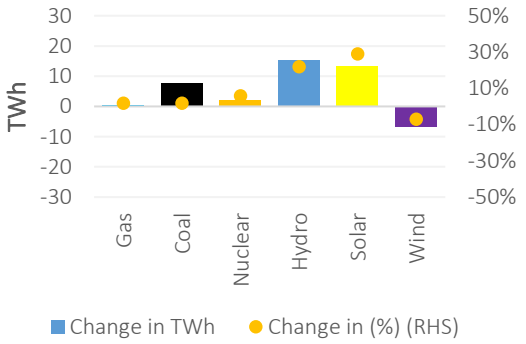
In April 2024, China's apparent gas demand, which encompasses domestic production, pipeline gas and LNG imports, rose by 8.5% y-o-y to reach 34 bcm, driven by a recovery in economic activities and lower LNG prices (Figure 28). Electricity production from gas increased by 2% y-o-y, while the total electricity production rose by 5% to reach 730 TWh (Figure 29). Coal remained the dominant fuel in the power mix with 58%, followed by non-hydro renewables (22%), hydro (12%), nuclear (5%) and gas (3%). Additionally, China's state-controlled CNOOC forecasted that domestic natural gas consumption would reach 410 bcm in 2024 and 700 bcm by 2040.

Figure 28: Gas consumption in China



Source: GECF Secretariat based on data from Refinitiv

Figure 29: Trend in electricity production in China in in April 2024 (y-o-y change)



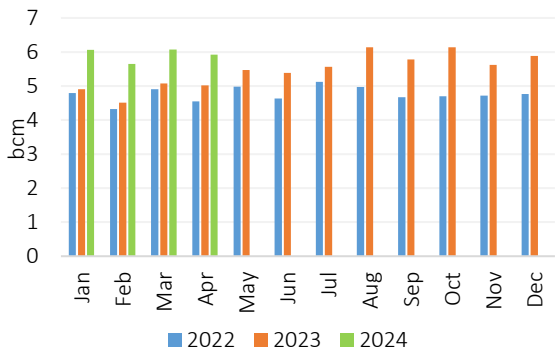
Source: GECF Secretariat based on data from Ember

In the first 4 months of 2024, Chinese gas consumption increased by 9.7% y-o-y to 141 bcm.

2.2.2 India

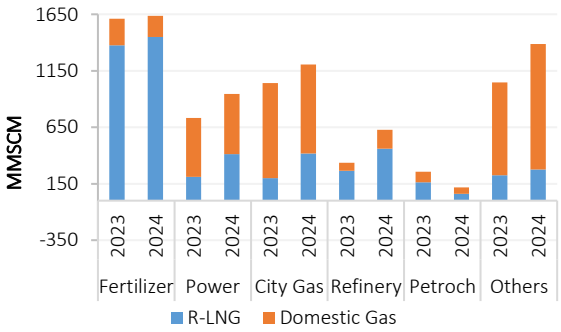
In April 2024, India's gas consumption increased by 18% y-o-y to 5.9 bcm, marking its sixteenth consecutive month of y-o-y growth (Figure 30). In the sectoral breakdown, the fertilizer sector accounted for 28% of gas demand, followed by city gas distribution (20%), power generation (16%), refining (11%) and the petrochemical sector (2%) (Figure 31). Indian gas-based power utilities operated at their optimal capacity, driven by the power ministry's directive for gas-fired power plants to boost generation during the extreme heatwave.

Figure 30: Gas consumption in India



Source: GECF Secretariat based on data from PPAC

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



In the first 4 months of 2024, India's gas consumption increased by 22% y-o-y to 24 bcm.

2.2.3 Japan

In May 2024, Japan's gas consumption dropped by 13% y-o-y to 5.4 bcm, driven by reduced demand from the power generation sector amid unusually mild weather (Figure 32). The country recorded temperatures 0.67°C above average, marking the 16th consecutive month of warmer-than-normal conditions. Additionally, increased nuclear power availability reduced the dependence on gas for electricity generation (Figure 33). The city gas sector also saw a 1.3% y-o-y decrease in consumption due to lower demand from commercial and industrial users.

Despite the continued closure of several thermal generation units and predictions of hotter-than-normal weather, Japan is expected to have sufficient power supplies to meet peak summer demand. The Japan Meteorological Agency forecasts above-average temperatures from June to August, nevertheless, the power sector is likely to have sufficient nuclear output, with an average of 10,175 MW of nuclear capacity expected to be operational from April to September.

Figure 32: Gas consumption in Japan

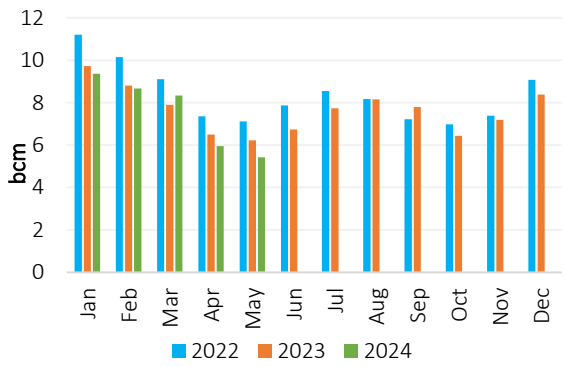
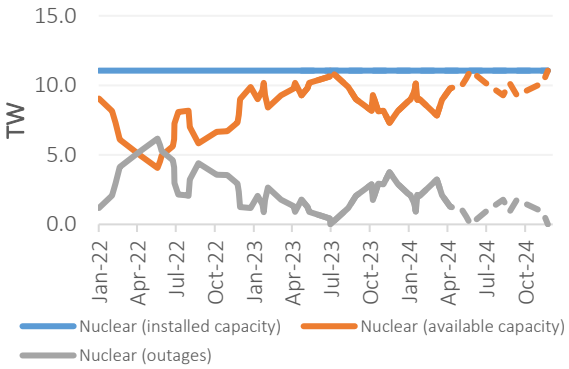


Figure 33: Nuclear availability in Japan



Source: GECF Secretariat based on data from Refinitiv

In the first 5 months of 2024, Japan's gas consumption decreased by 4% y-o-y to 38 bcm.

2.2.4 South Korea

In May 2024, South Korea's gas consumption declined by 6.7% y-o-y to 3.3 bcm (Figure 34). This decrease was driven by a 9% y-o-y drop in the power generation sector and a 1% decrease in the city gas sector. Additionally, the Heating Degree Days (HDD) in South Korea decreased by 10% y-o-y, indicating a lower demand for heating compared to the prior year (Figure 35).

Figure 34: Gas consumption in South Korea

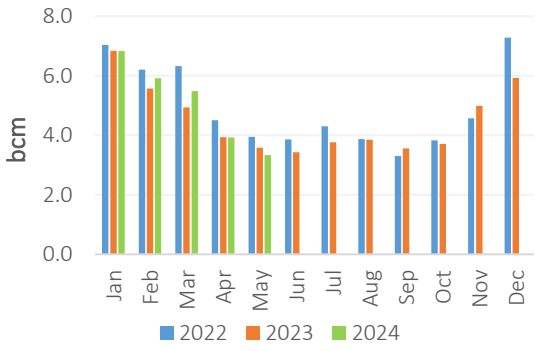
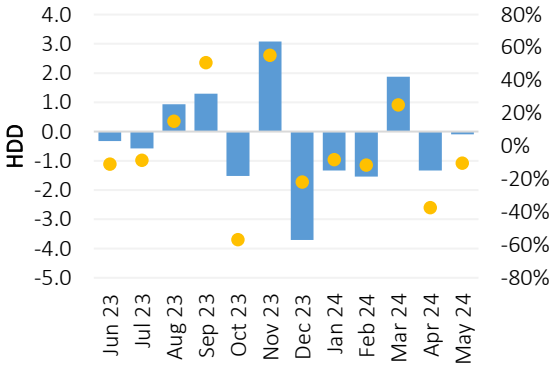


Figure 35: HDD in South Korea (y-o-y change)



Source: GECF Secretariat based on data from Refinitiv

In the first 5 months of 2024, South Korea's gas consumption rose by 3% y-o-y to 26 bcm.

2.3 North America

2.3.1 US

In May 2024, US gas consumption increased by 1.7% y-o-y to 66 bcm (Figure 36). This growth was led by the power generation sector, driven by the shift from coal to gas, as gas prices became more competitive, in addition to the increase in the power demand for cooling in some regions. In contrast, the residential and commercial sectors recorded declines in gas consumption of 2.2% and 12% y-o-y, respectively, influenced by mild weather. Meanwhile, the industrial sector experienced an increase of 1.2% y-o-y in gas consumption.

Power generation from gas saw a 4.6% y-o-y increase, whereas the overall electricity production rose by 6%. The month was marked by a rise in generation from nuclear, solar, and wind, while coal and hydro recorded a decline (Figure 37). In the power mix, gas continued to lead with a 42% share, followed by non-hydro renewable (20%), nuclear (18%), coal (13%) and hydro (7%).

Figure 36: Gas consumption in the US

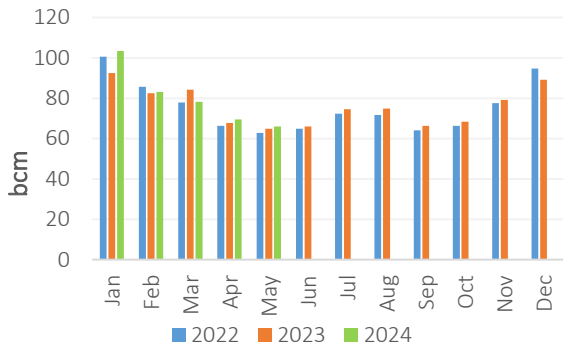
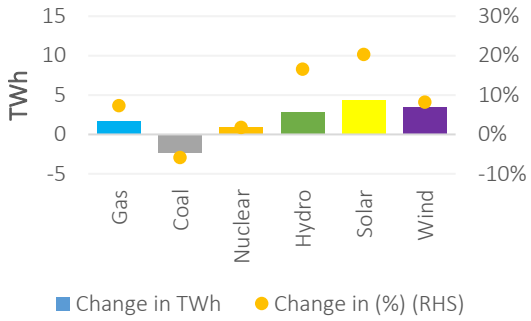


Figure 37: Electricity production in the US in May 2024 (y-o-y change)



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

In the first 5 months of 2024, US's gas consumption increased by 2% y-o-y to reach 400 bcm.

2.3.2 Canada

In May 2024, Canada's gas consumption rose by 4% y-o-y to reach 8.6 bcm (Figure 38). This rise was mainly due to cooler weather in some regions. May 2024 saw cold temperatures in British Columbia and Yukon, with Northern Yukon showing the most significant cold anomalies (Figure 39). That led to a rise in gas usage in the residential, commercial and combined industrial and power generation sectors by 8%, 1% and 4% y-o-y, respectively.

Figure 38: Gas consumption in Canada

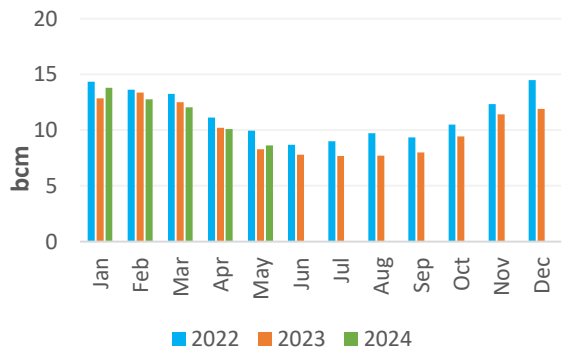
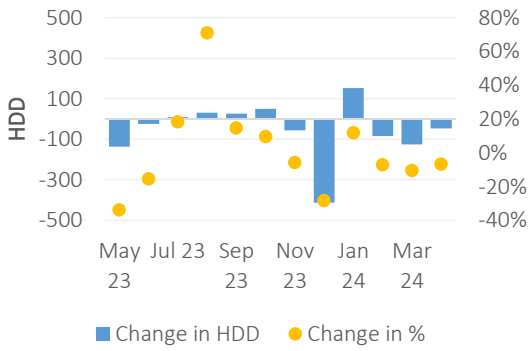


Figure 39: HDD in Canada (y-o-y change)



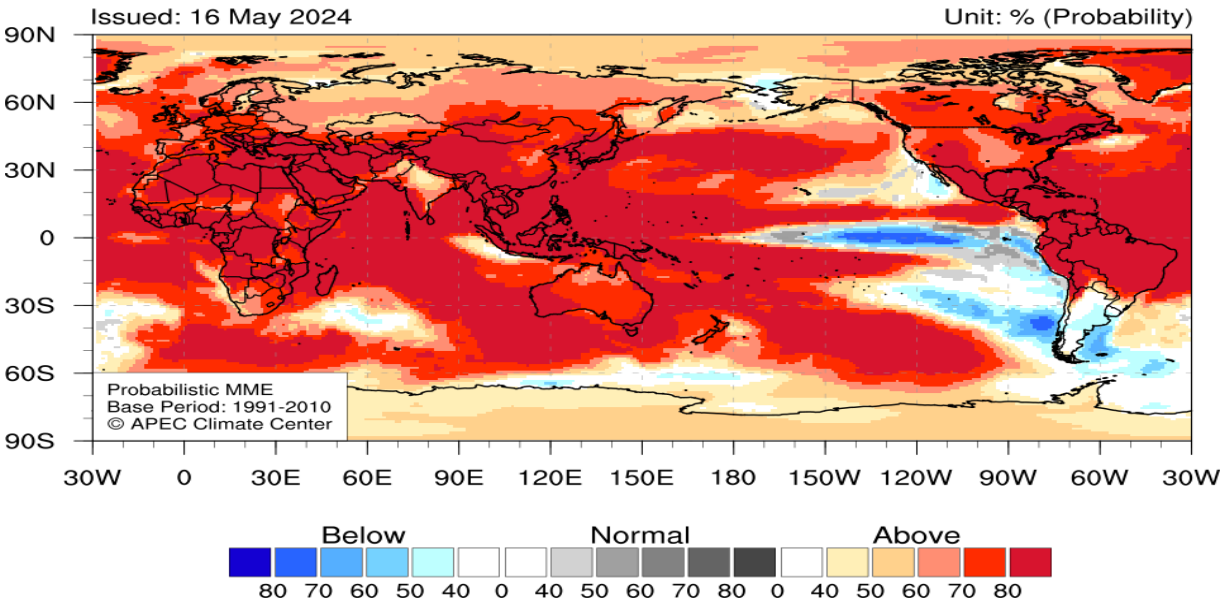
Source: GECF Secretariat based on data from Refinitiv

2.4 Weather forecast

2.4.1 Temperature forecast

According to the APEC Climate Center, a pronounced likelihood of above normal temperatures is predicted for most of the globe (excluding central and eastern equatorial Pacific and the eastern subtropical North Pacific) for the period June to August 2024 (Figure 40).

Figure 40: Temperature forecast June to August 2024

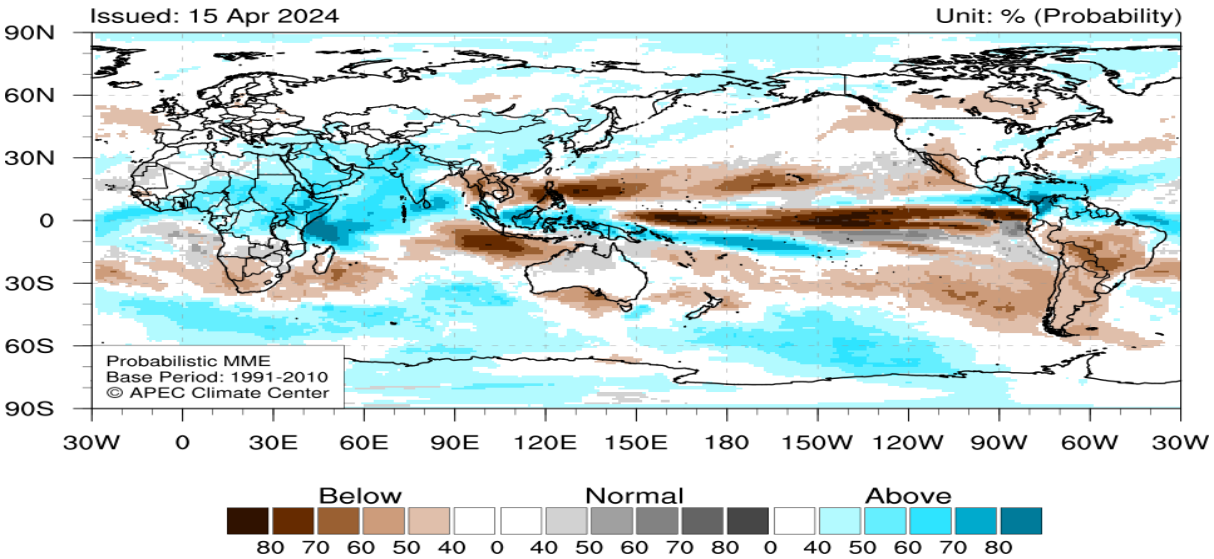


Source: APEC Climate Center

2.4.2 Precipitation forecast

According to the same source, above normal precipitation is predicted for the region spanning central Africa to the western Indian Ocean, the Arabian Sea, and Indonesia, the Middle East, South Asia, the Caribbean Sea for the period June to August 2024 (Figure 41).

Figure 41: Precipitation forecast June to August 2024 2024



Source: APEC Climate Center

3 Gas Production

3.1 Europe

In April 2024, Europe experienced a 0.6% y-o-y reduction in gas production, resulting in a total output of 15.7 bcm (Figure 42). This decrease primarily originated from a significant decline in gas production from the UK and the Netherlands, which was partially offset by the increase in Norwegian gas production. For the period Jan-Apr 2024, the cumulative gas production in Europe reached 67 bcm, representing a 1.6% y-o-y rise.

3.1.1 Norway

Norway's gas production in April 2024 increased by 3.4% y-o-y to achieve 10.7 bcm (Figure 43). The 133 mmcm/d giant Troll gas field underwent a short, planned maintenance outage which reduced its output capacity to 109 mmcm/d for one day. The same occurred for the 25.8 mmcm/d Aasta Hansteen gas field, which underwent a planned maintenance outage which reduced its output capacity to 19.8 mmcm/d for one day. For the period Jan-Apr 2024, cumulative gas production in Norway reached 44.7 bcm, representing a 4% uptick, driven by the relative increase in gas output from the giant Troll field, even accounting for the unplanned maintenance outage period.

3.1.2 UK

In April 2024, the UK gas production declined by 6% y-o-y to 2.8 bcm. Unplanned outages in the 10.2 mmcm/d Bacton Perenco and the 7.4 mmcm/d Bacton Seal gas terminals reduced their capacities for a period of one and half days. For the period Jan-Apr 2024, the cumulative gas production in the UK reached 11.6 bcm, representing a 4.6% y-o-y decline, mainly driven by the sustained decline in the gas output from mature UK fields.

3.1.3 Netherlands

In April 2024, the Netherlands experienced a significant 32% y-o-y reduction in its gas production, which stood at 0.7 bcm. Furthermore, this represented a 26% decrease compared to the March 2024 level. For the period Jan-Apr 2024, the cumulative gas production in the Netherlands was 3.9 bcm, representing a 21% decline compared to the same period in 2023. This decrease in gas production is mainly due to reduced output from ageing Dutch fields.

Figure 42: Europe's monthly gas production

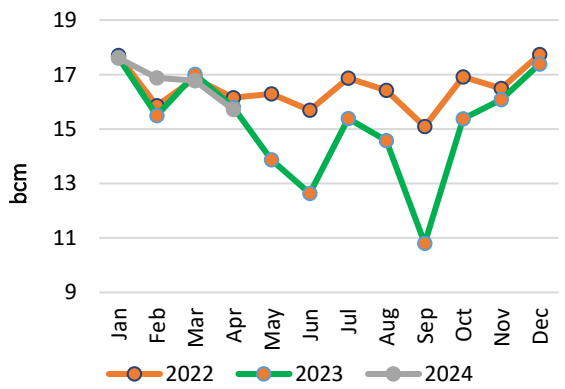
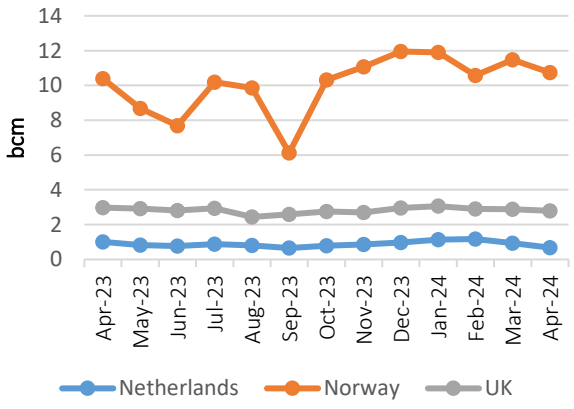


Figure 43: Gas production in key European countries



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

3.2 Asia Pacific

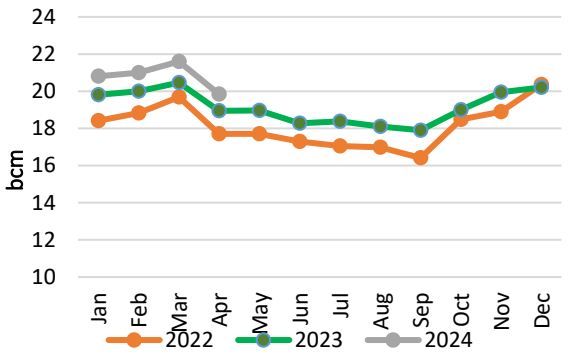
3.2.1 China

In April 2024, China's gas production reached 19.8 bcm, representing a 4.8% y-o-y rise (Figure 44Figure 44). Coal bed methane production continued its growth to reach 1.32 bcm, with a significant 25% y-o-y increase. For the period Jan-Apr 2024, cumulative Chinese gas production totalled 83.2 bcm. Notably, CNOOC announced the discovery of an ultra-shallow offshore gas play in the western part of the ultra-deepwater South China Sea. The discovery raised the potential of recoverable gas resources from the region of the South China Sea to 1 tcm.

3.2.2 India

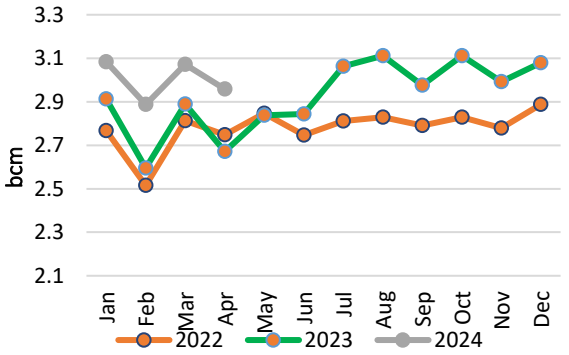
In April 2024, India's gas production rose by 6% y-o-y to reach 3 bcm (Figure 45). The offshore gas fields' output reached 2.2 bcm, with an 11% y-o-y rise and 74% of the total production. In first four months of 2024, cumulative gas production reached 12 bcm, an 8.5% y-o-y uptick.

Figure 44: Trend in gas production in China



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

Figure 45: Trend in gas production in India



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

3.2.3 Australia

The country's gas production in March 2024 reached 13.9 bcm, representing a 2.7% y-o-y growth (Figure 46). Gas production from CBM fields rose by 14% to 3.6 bcm, representing 26% of the total domestic production (Figure 47). For the first quarter of 2024, cumulative Australian gas production reached 40.7 bcm, representing a 2.6% y-o-y rise.

Figure 46: Trend in gas production in Australia

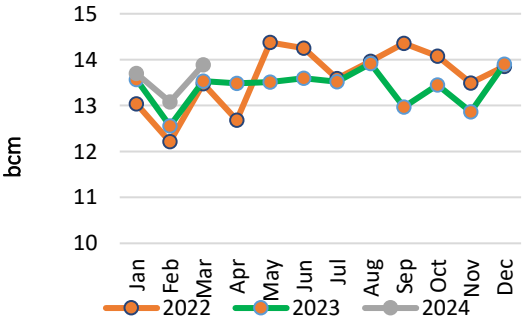
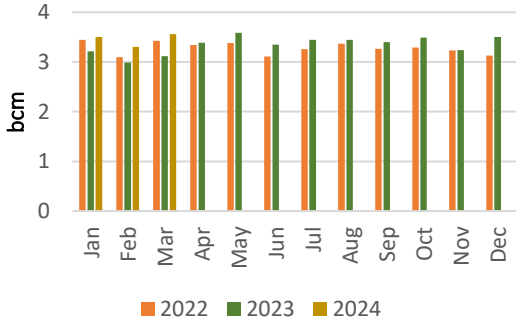


Figure 47: Trend in CBM production in Australia



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

3.3 North America

3.3.1 US

In May 2024, US shale gas production rose by 1% y-o-y to reach a monthly output of 87.4 bcm (Figure 48), despite the announced cuts in gas production by some private producers amidst low Henry Hub gas prices. The Appalachian region, accounted for 36% of the total shale gas production, while the Permian shale oil play with its associated gas production represented 25%, with an annual growth rate of 10%.

Figure 48: Trend in shale gas production in the US

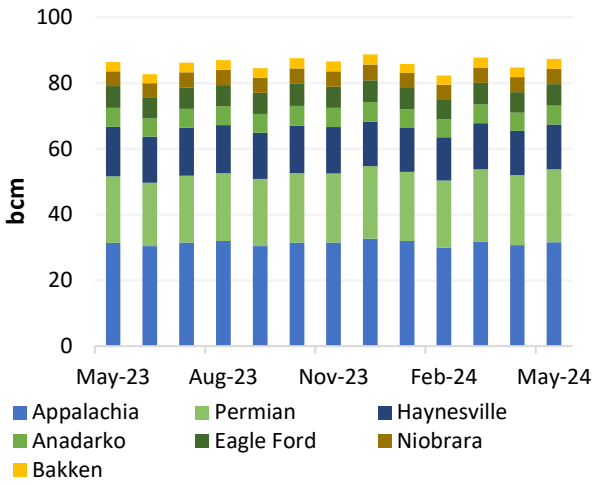
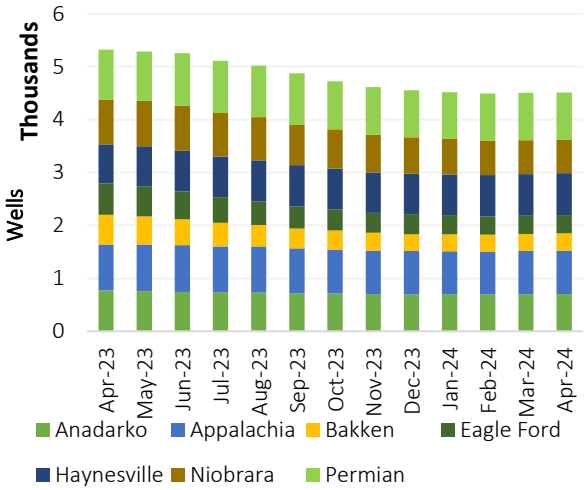


Figure 49: DUC wells count in the US



Source: GECF Secretariat based on data from the EIA

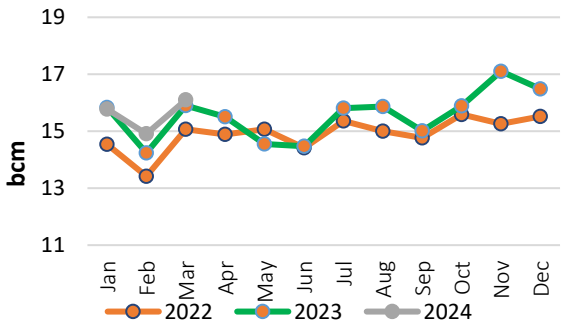
As of April 2024, the number of oil and gas drilling rigs operating in the seven key shale oil and gas regions in the US stood at 553, representing a decline by 4 rigs compared to March 2024, driven by the reduction in number of rigs in Haynesville basin. The Permian basin accounted for the major share of the current drilling rigs with more than 57%. Additionally, in April 2024, the total number of drilled but uncompleted (DUC) wells in the seven major regions amounted to 4,510, marking a 6-well m-o-m increase (Figure 49). With the current low Henry Hub prices, the private producers are expected to slow down their drilling activity, aiming to reduce cost burden, and therefore relying on their inventory of DUCs.

3.3.2. Canada

In March 2024, Canada's gas production reached 16.1 bcm, representing a 1.3% y-o-y increase (Figure 50). The state of Alberta accounted for 9.7 bcm, representing 60% of the total Canadian gas production.

For the first quarter of 2024, the cumulative gas production in Canada reached 46.8 bcm, a 1.7% y-o-y rise.

Figure 50: Trend in gas production in Canada



Source: GECF Secretariat based on data from CER

3.4 Latin America and the Caribbean (LAC)

3.4.1 Brazil

In April 2024, Brazil's gross gas production declined by 4% y-o-y to reach 4.1 bcm (Figure 51). Notably, pre-salt fields were responsible for more than 77% of production, with the Tupi field in the Santos pre-salt basin emerging as the largest gas-producing field at 1.05 bcm. 54% of gross production was reinjected into reservoirs, while gas flaring represented 3% of gross production (Figure 52). The cumulative output for the period Jan-Apr 2024 reached 17.4 bcm, nearly mirroring the output of the same period in 2023.

Figure 51: Trend in gross gas production in Brazil

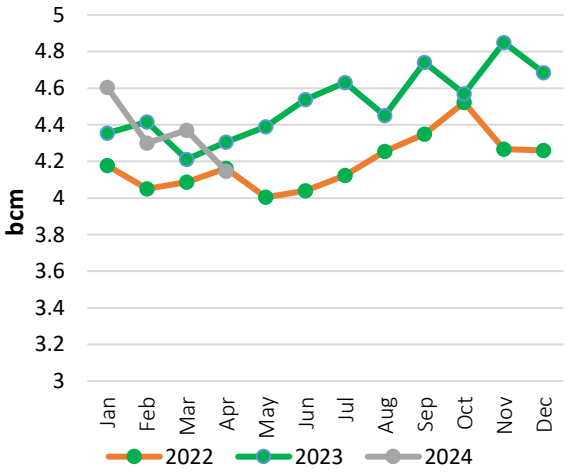
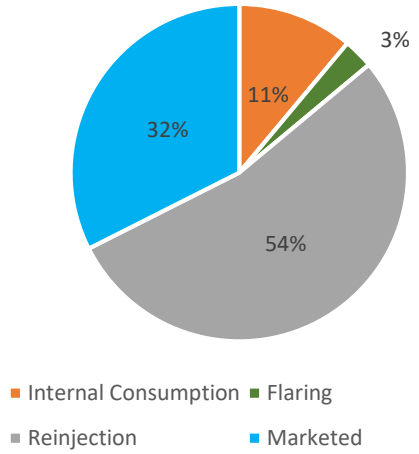


Figure 52: Distribution of gross gas production in Brazil



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

3.4.2 Argentina

In April 2024, Argentina's gas production rose by 7.6% y-o-y to reach a total output of 4.1 bcm (Figure 53). Shale gas production rose by 24% y-o-y to reach 1.9 bcm, representing 46% of the total production, driven by increased output and the debottlenecking of the Vaca Muerta shale gas basin (Figure 54). In addition, tight gas reservoir production reached a 14% share. For the period Jan-Apr 2024, Argentina's gas output stood at the level of 16 bcm, representing a 3.4% y-o-y increase.

Figure 53: Trend in gas production in Argentina

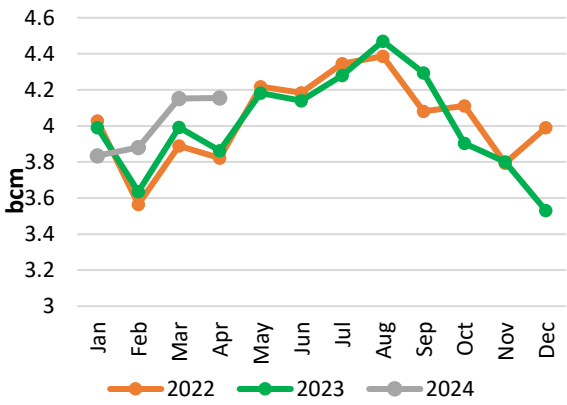
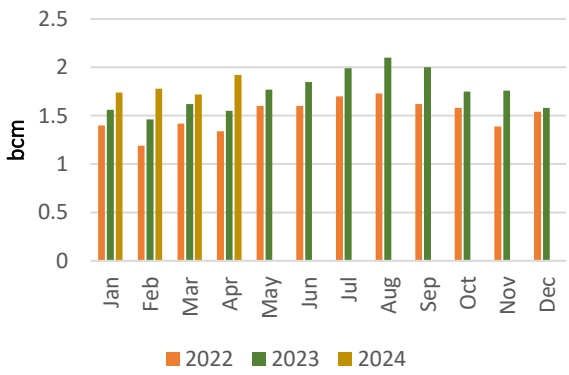


Figure 54: Trend in shale gas production in Argentina

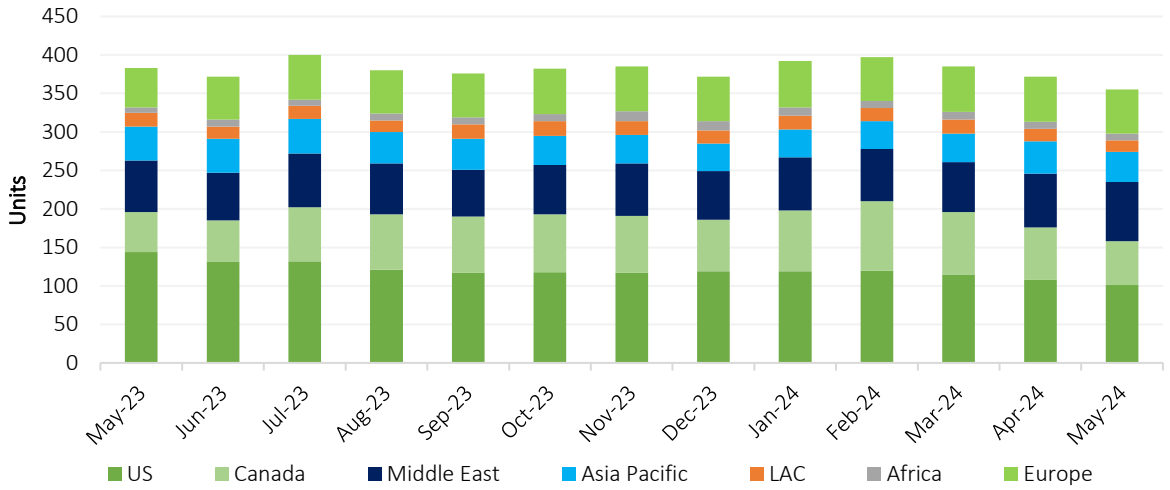


Source: GECF Secretariat based on data from Argentinian Ministry of Economy

3.5 Other developments

3.5.1 Upstream tracker

Figure 55: Trend in monthly global gas rig count



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

In May 2024, the global number of gas drilling rigs dropped by 17 units m-o-m to reach 355 rigs, driven by the consecutive decrease in gas rigs throughout Canada and the US by 11 and 7 rigs, respectively (Figure 55). This development was mainly driven by the slowdown in the drilling activity in North America, amid low Henry Hub gas prices.

In April 2024, the total volume of discovered gas and liquids amounted to 230 million barrels of oil equivalent (boe). Of this, liquid oil accounted for the majority with 89% (200 million boe), while natural gas constituted 11% (5 bcm). Cumulative discovered volumes in the period Jan-Apr 2024 amounted to 1.7 billion boe (Figure 56). 8 new discoveries were announced in April 2024, half of them were offshore. In terms of regional distribution, LAC dominated the new discovered volumes in April with 47%, mainly in Brazil and Colombia, while Africa provided 33% of the new discoveries, followed by Asia Pacific with 12% (Figure 57).

Figure 56: Monthly gas and liquid discovered volumes

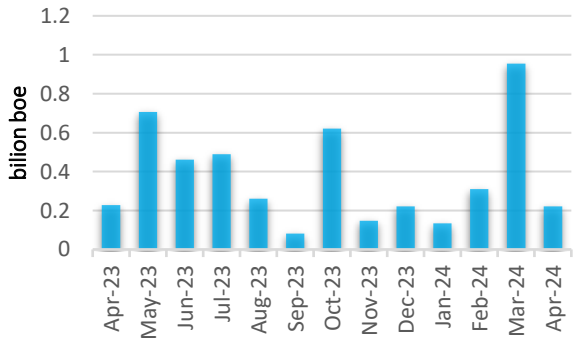
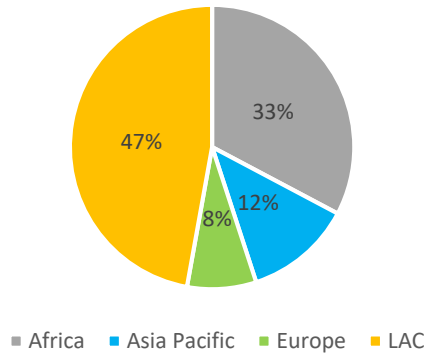


Figure 57: Discovered volumes in April 2024 by region



Source: GECF Secretariat based on Rystad Energy

The Chotaduro onshore gas discovery, located in block VIM 21 in Colombia, was the most significant gas discovery announced in April 2024, with estimated recoverable gas resources of 3.2 bcm.

3.5.2 Other regions

The UAE's Mubadala Energy announced another substantial gas discovery in Indonesia: According to the Mubadala Energy announcement, the company made another notable gas discovery in Tangkulo, located in the South Andaman area, offshore Indonesia. This back-to-back discovery, after the Layaran discovery in December 2023, has the potential to position the South Andaman area as one of the most promising gas plays worldwide. The new discovery is estimated to hold over 55 bcm of gas in place. In his comment over the new discovery, Mubadala Energy's CEO remarked that the new discovery "strengthens their ability to play a proactive role in the energy transition through a gas biased strategy".

Iraq launched its sixth oil and gas licensing round: During a ceremony hosted by the Prime Minister of Iraq, the Oil Ministry announced the launch of the fifth supplementary and the sixth licensing rounds. These are the country's first bidding rounds since 2018 and included a total of 29 onshore oil and gas exploration blocks across 12 provinces, which are anticipated to drive investments in these regions. Expected gas production from these rounds is estimated at about 8.3 bcma. The Oil Ministry has awarded 12 projects so far, including 5 to Chinese companies and 2 to the Iraqi Kurdish firm, KAR Group.

South Korea announced a new exploration campaign in the East Sea: According to the South Korean Presidency press release, the country approved a new exploration drilling campaign for deep-sea oil and gas fields in the East Sea. Recently, the South Korean president announced that there is good probability of finding up to 14 billion boe of oil and gas resources off Yeongil bay, near Pohang city. This volume is estimated to be sufficient to meet the country's gas consumption for up to 29 years, and oil consumption for up to four years. The results of the exploration campaign are expected to be confirmed by the first half of 2025.

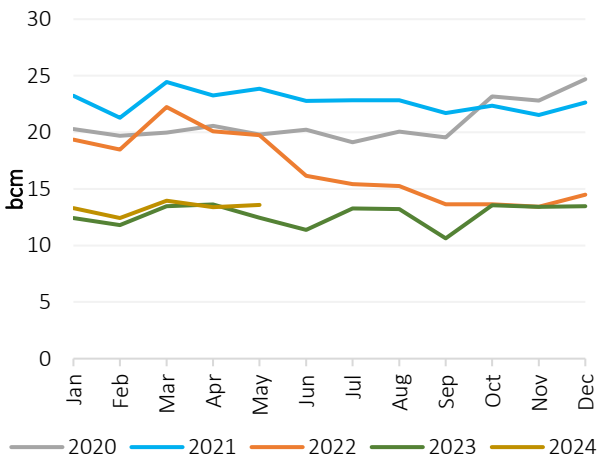
4 Gas Trade

4.1 PNG trade

4.1.1 Europe

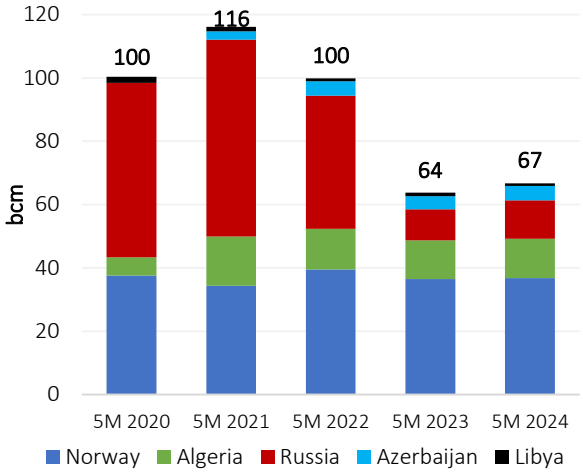
There was little change in the PNG supply to the EU in May 2024. During this month, 13.6 bcm PNG imports was recorded, which represented a 2% rise m-o-m, and a 9% increase y-o-y (Figure 58). Within the period from January to May, total PNG imports by the EU reached 67 bcm, which was an increase of 5%, compared with the volume imported during the same period in 2023 (Figure 59). Russia continued to drive the increase in supply, accounting for 24% more PNG to the region compared with the previous year. Azerbaijan also continued to ramp up flows, by 9%, compared with 2023.

Figure 58: Monthly PNG imports to the EU



Source: GECF Secretariat based on data from Refinitiv

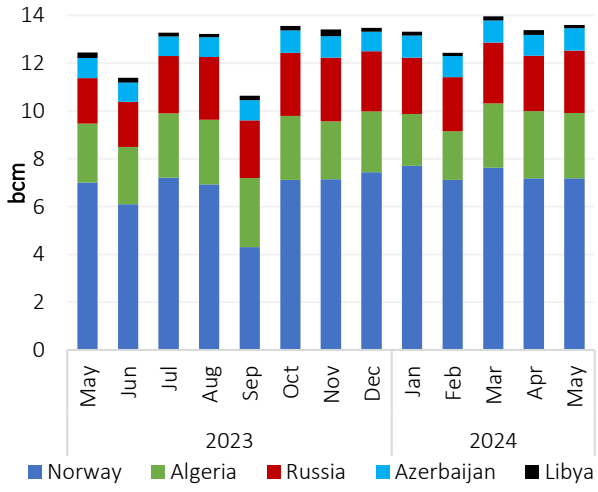
Figure 59: Year-to-date EU PNG imports by supplier



Source: GECF Secretariat based on data from Refinitiv

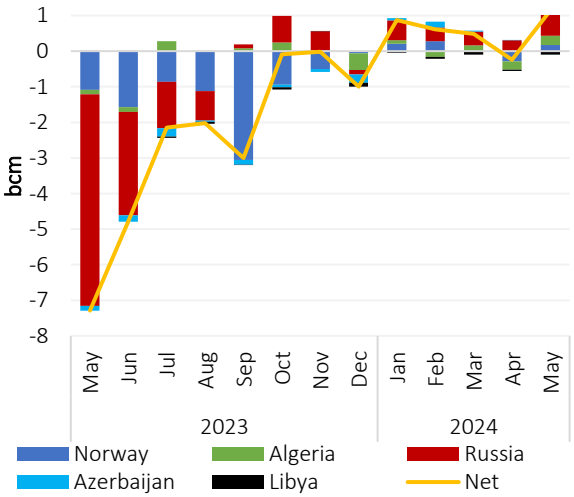
Whereas PNG supply from Russia and Algeria has been expanding in recent months, imports from Norway have fluctuated due to maintenance activities (Figure 60). In the first 5 months of 2024, Norway accounted for 55% of the PNG imported by the EU, followed by Algeria at 19%, and Russia at 18%. Both Russia and Azerbaijan have recorded higher levels of PNG supply in the five months of 2024, compared with the corresponding months in 2023 (Figure 61).

Figure 60: Monthly EU PNG imports by supplier



Source: GECF Secretariat based on data from Refinitiv

Figure 61: Y-o-y variation in EU PNG supply

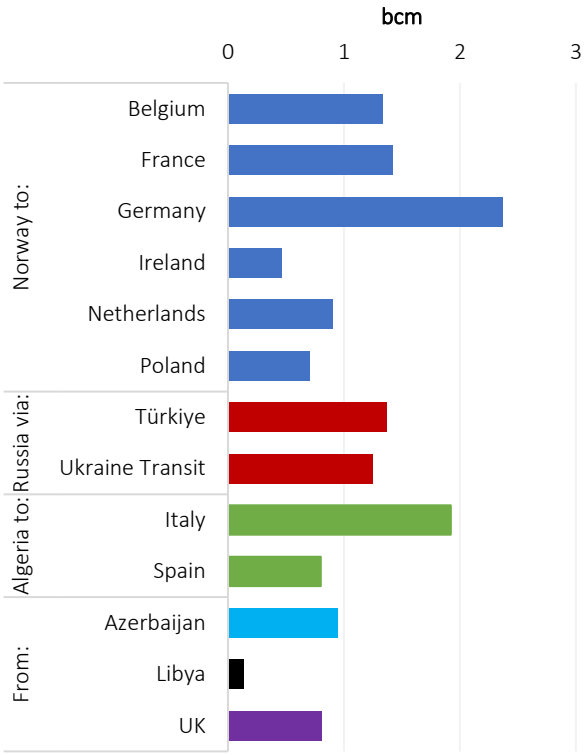


Source: GECF Secretariat based on data from Refinitiv

Figure 62 shows the PNG imports to the EU via the major supply routes in May 2024. Russia increased supply via both routes during the month, by 18% m-o-m via Turkstream, and by 6% m-o-m via the Ukraine transit. Norway's supply to the Netherlands and Poland increased by 18% and 15% respectively, while flows to Germany contracted by 10% m-o-m. Algerian exports via Italy declined by 6% m-o-m, while accounting for 71% of PNG exports from that country during the month. Net PNG flows from the UK surged by 118% m-o-m, reaching 0.8 bcm.

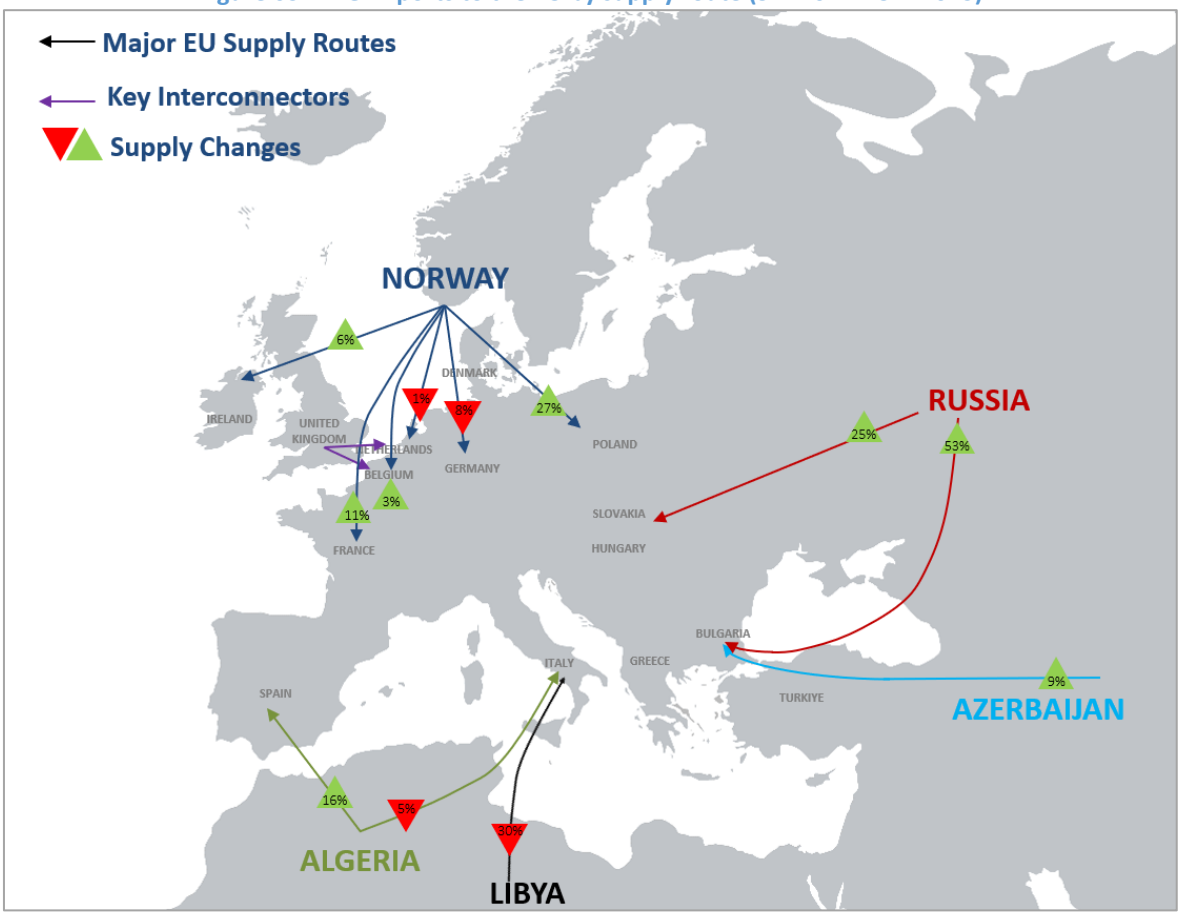
Figure 63 displays the PNG imports to the EU via the major supply routes from January to May 2024, versus the same period in 2023. Russian supply via Turkstream increased by 53%, while supply via the Ukraine transit rose by 25%. In addition, Algeria increased supply via the Medgaz pipeline to Spain by 16%. Compared with 2023, there was 82% less flows entering the EU from the UK.

Figure 62: EU PNG imports by supply route, in May 2024



Source: GECF Secretariat based on data from Refinitiv

Figure 63: PNG imports to the EU by supply route (5M 2024 v 5M 2023)

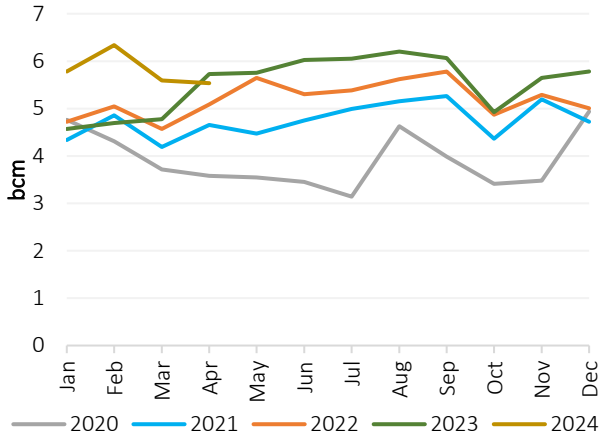


Source: GECF Secretariat based on data from Refinitiv

4.1.2 Asia

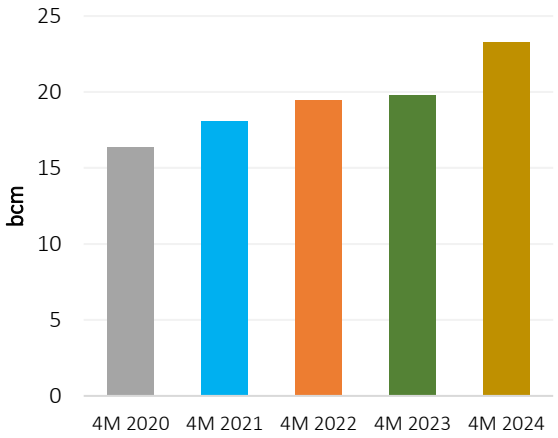
In April 2024, there were 5.5 bcm of PNG imported by China, which represented a decline of 1% m-o-m (Figure 64). This was also 3% lower y-o-y, marking the first month of 2024 in which the volume of PNG imported was less than the quantity imported in the previous year. With the quantity of LNG imports having decreased m-o-m, the share of PNG imports in the total gas imports for April rose to 40%. During the period January to April 2024, China imported 23 bcm, which was an increase of 18% compared with the same period in 2023 (Figure 65).

Figure 64: Monthly PNG imports in China



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

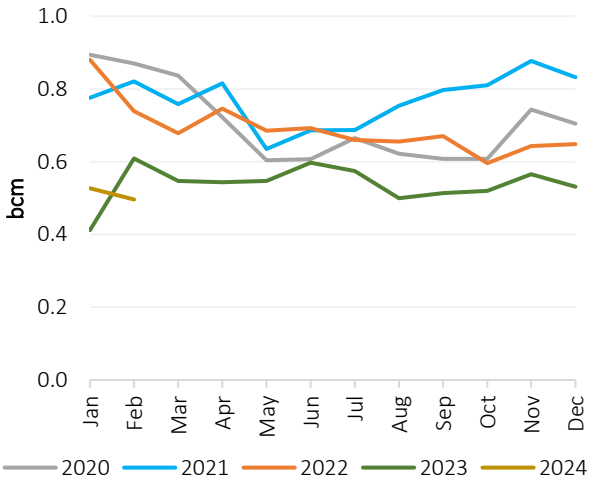
Figure 65: Year-to-date PNG imports in China



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

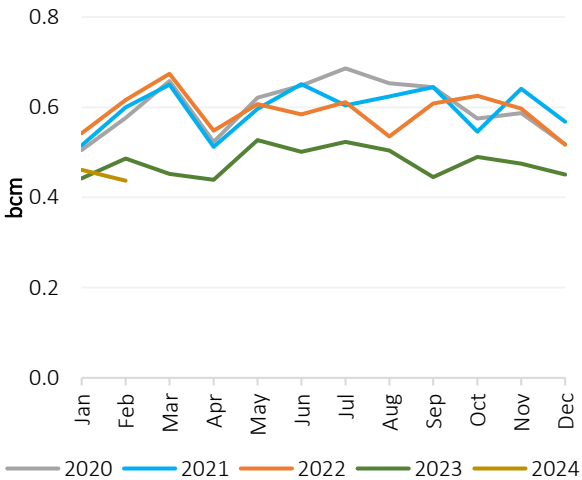
In February 2024, Singapore imported 0.50 bcm of PNG from Indonesia and Malaysia, which was a decline of 6% from the level recorded in the previous month, and 19% lower y-o-y (Figure 66). In addition, in February 2024, Thailand imported 0.44 bcm of PNG from Myanmar (Figure 67). This quantity was 5% lower m-o-m, and 10% less than the level of imports one year prior, which further emphasises the falling production in Myanmar.

Figure 66: Monthly PNG imports in Singapore



Source: GECF Secretariat based on data from JODI Gas

Figure 67: Monthly PNG imports in Thailand



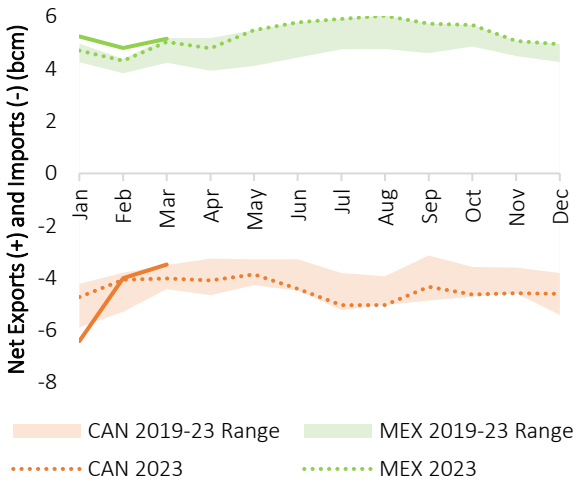
Source: GECF Secretariat based on data from JODI Gas

4.1.3 North America

The US delivered 5.1 bcm of PNG to Mexico in March 2024, which was 7% higher m-o-m, and 2% higher than one year prior (Figure 68). Net PNG imports from Canada to the US continued to fall, declining by 13% m-o-m to reach 3.5 bcm. This quantity was also 13% less than that of one year ago.

As a result, there was a healthy 1.7 bcm of net flows of PNG from the US to the other countries of North America. The average monthly flows in the region in March 2024 were 6.8 bcm from Canada to the US, 3.3 bcm from the US to Canada in addition to the 5.1 bcm from the US to Mexico.

Figure 68: Historical net PNG trade in the USA



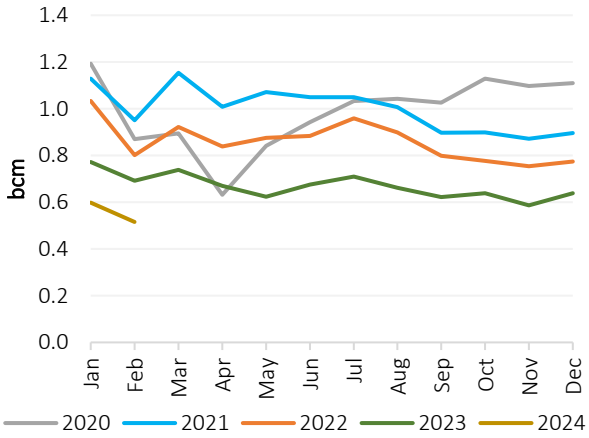
Source: GECF Secretariat based on data from US EIA

4.1.4 Latin America and the Caribbean

Bolivia exported 0.52 bcm of PNG to Brazil and Argentina in February 2024 (Figure 69). This quantity was 14% less than the previous month, and 26% less than the level recorded one year ago.

In Argentina, there were 0.28 bcm of PNG exported to Chile in February 2024. This represented a 4% increase compared to the previous month, and 12% compared with the previous year.

Figure 69: Monthly PNG exports from Bolivia



Source: GECF Secretariat based on data from JODI Gas

4.1.5 Other developments

Russia to expand pipeline gas trade in Central Asia: Russia continues the diversification of its pipeline gas markets, by expanding its supply to Central Asian countries. Gazprom had recently concluded the modifications to the Central Asia-Centre (CAC) pipeline system, to allow for reverse flow of gas from Russia to Uzbekistan, via transit through Kazakhstan. Russia supplied around 1.3 bcm in 2023, with 3.8 bcm expected in 2024. Following a meeting between the Presidents of both countries, Russia has now committed to expanding the capacity of the CAC system, to allow for flows up to 11 bcma.

Power of Siberia pipeline completed: State company PipeChina announced the completion of the final section of the Power of Siberia gas pipeline, which is used to import gas from Russia. This final section connects Nantong to Shanghai, in the Jiangsu province of Eastern China. Testing of this section has begun, ahead of full commissioning. Shanghai has previously accessed Russian pipeline gas supply via China's West-to-East gas system.

4.2 LNG trade

4.2.1 LNG imports

In May 2024, global LNG imports fell by 3.9% (1.34 Mt) y-o-y to 33.06 Mt, which was also lower than the May 2023 and 2022 LNG imports (Figure 70). The drop in LNG imports was a knock-on effect from the decrease in LNG exports recorded in April 2024. Europe and LAC led the decline in global LNG imports, which was partially offset by higher imports in the Asia Pacific and MENA regions (Figure 71). Between January and May 2024, global LNG imports increased marginally by 1.2% (2.10 Mt) y-o-y to stand at 174.96 Mt.

Figure 70: Trend in global monthly LNG imports

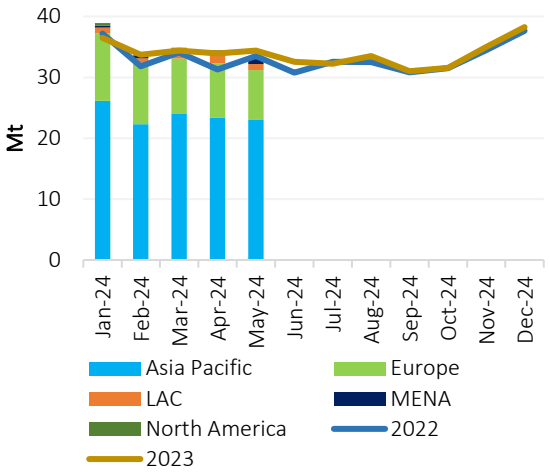
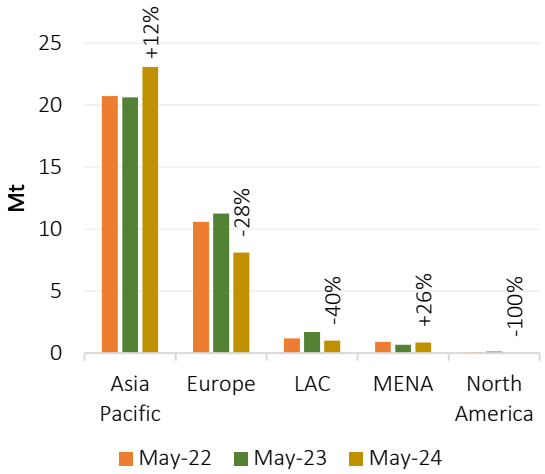


Figure 71: Trend in regional LNG imports



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.1.1 Europe

In May 2024, Europe's LNG imports dropped by 28% (3.15 Mt) y-o-y, falling for the 11th straight month compared to the previous year (Figure 72). The weaker LNG imports were attributed to lower gas consumption, high gas storage levels, stronger pipeline gas imports from Norway and a significant premium of LNG prices in Asia Pacific over Europe, which pulled LNG supply away from Europe. Belgium, France, Lithuania, the Netherlands, Spain, Türkiye and the UK drove accounted for the bulk incremental decline in the region's LNG imports (Figure 73). For the period January to May 2024, European LNG imports fell sharply by 19% (11.31 Mt) y-o-y to 47.22 Mt.

In Belgium, weaker gas consumption, lower pipeline gas exports to Germany and the Netherlands, high gas storage inventory, and an increase in pipeline gas imports from Norway led to the decline in LNG imports. Similarly, the drop in French LNG imports was attributed to declines in pipeline gas exports to Germany and Switzerland, a decrease in gas consumption, an increase in gas storage, and an uptick in pipeline gas imports from Norway. Maintenance work on the Independence FSRU in Lithuania resulted in a sharp decline in its LNG imports. An increase in pipeline gas imports from Norway, along with lower pipeline gas exports to Germany, also led to the fall in LNG imports in the Netherlands. In Spain, the reduction in LNG imports was due to maintenance activity at the Bilbao, Cartagena, and Huelva regasification terminals, lower gas consumption, and stronger pipeline gas imports from Algeria. Meanwhile, the lower LNG imports in Türkiye were mainly driven by a drop in LNG imports from the US. Finally, an increase in pipeline gas imports from Norway, lower gas consumption, and a decrease in pipeline gas exports to mainland Europe contributed to the fall in the UK's LNG imports.

Figure 72: Trend in Europe's monthly LNG imports

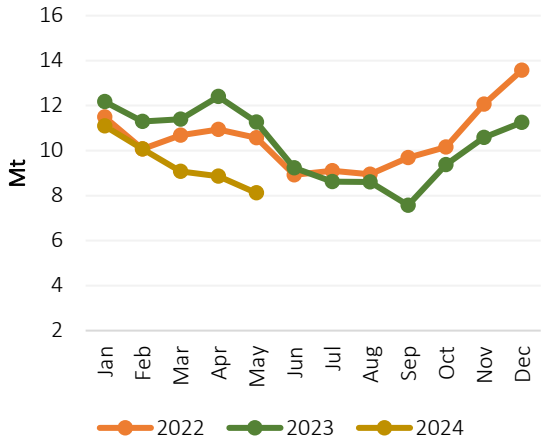
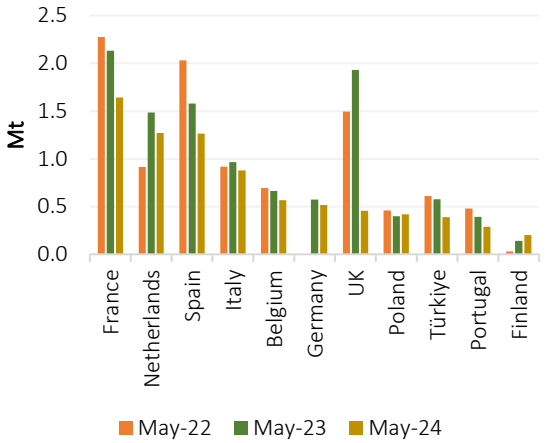


Figure 73: Top LNG importers in Europe



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.1.2 Asia Pacific

In May 2024, LNG imports in the Asia Pacific region continued to expand robustly, increasing by 12% (2.45 Mt) y-o-y to 23.07 Mt (Figure 74). This strong growth was driven by higher gas demand in the region due to heatwaves, LNG restocking ahead of the summer season, a ramp-up in imports in new markets and attractive spot LNG prices that stimulated spot buying. The overall increased LNG imports relate mainly to Bangladesh, China, India, Japan, the Philippines and South Korea, which offset lower imports in Thailand (Figure 75). Between January and May 2024, Asia Pacific's LNG imports expanded by 11% (11.29 Mt) y-o-y to 118.93 Mt.

The increase in LNG imports in Bangladesh was driven by attractive spot LNG prices, which encouraged spot LNG purchases. In China, the rise in LNG imports was due to higher gas demand and favourable spot LNG prices. India's LNG imports grew as a result of stronger cooling demand caused by a heatwave and attractive spot LNG prices. In Japan and South Korea, the pre-summer restocking of LNG contributed to higher imports in both countries. Additionally, the ramp-up in LNG imports from newly commissioned regasification terminals led to the growth of LNG imports in the Philippines. Conversely, the decline in Thailand's LNG imports may be attributed to increased domestic gas production.

Figure 74: Trend in Asia's monthly LNG imports

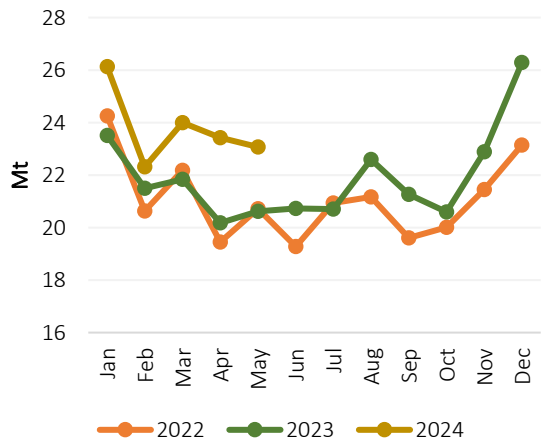
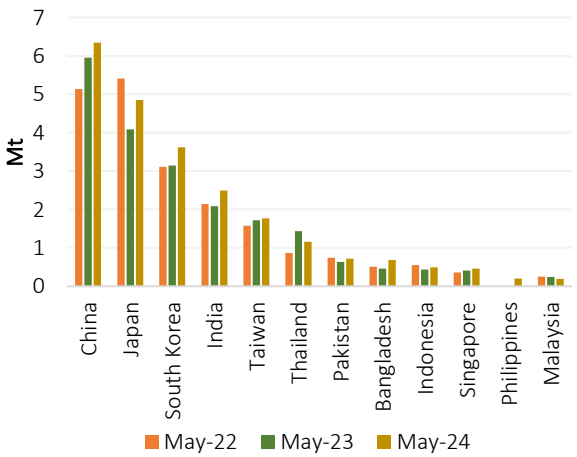


Figure 75: Top LNG importers in Asia Pacific



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.1.3 Latin America & the Caribbean (LAC)

In May 2024, LNG imports in the LAC region fell by 40% (0.69 Mt) y-o-y to 1.02 Mt, which represents the first decline since December 2023 (Figure 76). The weaker LNG imports were driven mainly by Argentina, Chile and Jamaica, which was partially offset by higher imports in Colombia (Figure 77). For the period January to May 2024, LNG imports in the LAC region increased grew by 25% (1.07 Mt) y-o-y to 5.30 Mt.

In Argentina, increased domestic gas production contributed to the decline in LNG imports. Additionally, the resumption of pipeline gas exports from Argentina to Chile at the end of 2023 likely reduced Chile's LNG imports. Jamaica did not import any LNG cargo in May, possibly due to the cessation of LNG reloads to Puerto Rico compared to the previous year. Conversely, higher gas demand for electricity generation in Colombia, driven by lower hydro power production due to the El Niño phenomenon, led to an increase in LNG imports.

Figure 76: Trend in LAC's monthly LNG imports

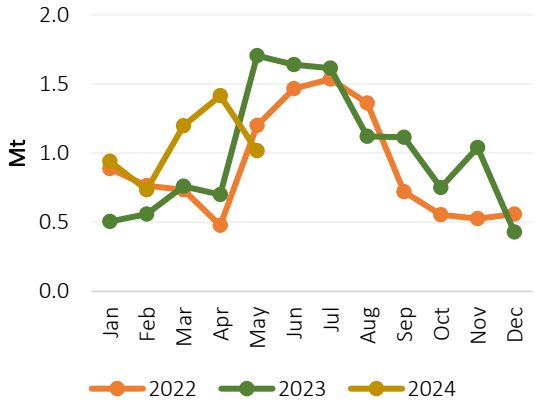
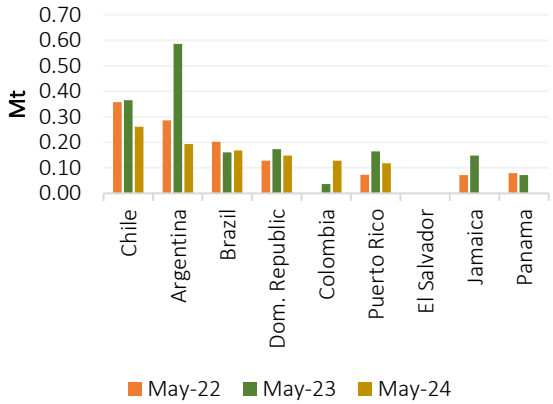


Figure 77: Top LNG importers in LAC



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.1.4 MENA

In May 2024, LNG imports in the MENA region jumped by 26% (0.17 Mt) y-o-y to 0.85 Mt (Figure 78). The stronger LNG imports was driven mainly by Jordan and, to a lesser extent, Kuwait (Figure 79). Between January and May 2024, MENA region's LNG imports grew by 43% (0.81 Mt) y-o-y to 2.69 Mt. The increase in Jordan's LNG imports was driven by Egypt's EGAS using the Aqaba FSRU to import LNG into Jordan, where it is subsequently regasified and transported via pipeline to Egypt.

Figure 78: Trend in MENA's monthly LNG imports

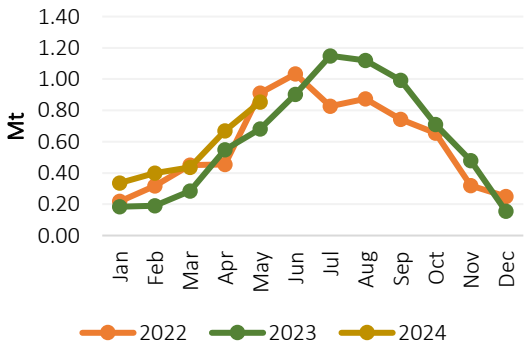
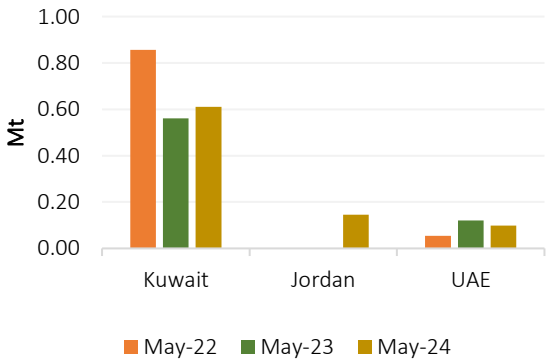


Figure 79: Top LNG importers in MENA



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.2 LNG exports

In May 2024, global LNG exports saw a marginal increase of 1.8% (0.57 Mt) y-o-y, reaching 33.15 Mt, which reversed the decline observed in April (Figure 80). This monthly export volume marked a record high for May. The growth in global LNG exports was primarily propelled by non-GECF countries, compensating for the decrease in LNG exports from GECF Member Countries and reduced LNG reloads.

The share of non-GECF countries in global LNG exports expanded from 51.4% in May 2023 to 53.6% in May 2024. Conversely, the shares of GECF Member Countries and reloads decreased from 47.4% and 1.2%, respectively, to 45.6% and 0.8%. Leading LNG exporters in May were the US, Australia and Qatar (Figure 81). Between January and May 2024, global LNG exports experienced a slight uptick of 0.9% (1.47 Mt) y-o-y to 173.51 Mt.

Figure 80: Trend in global monthly LNG exports

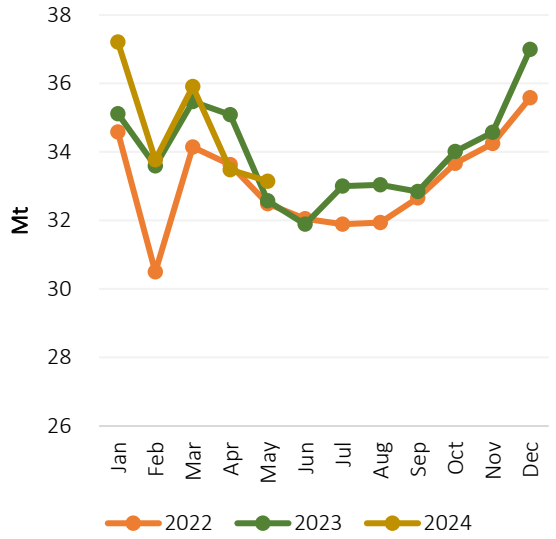
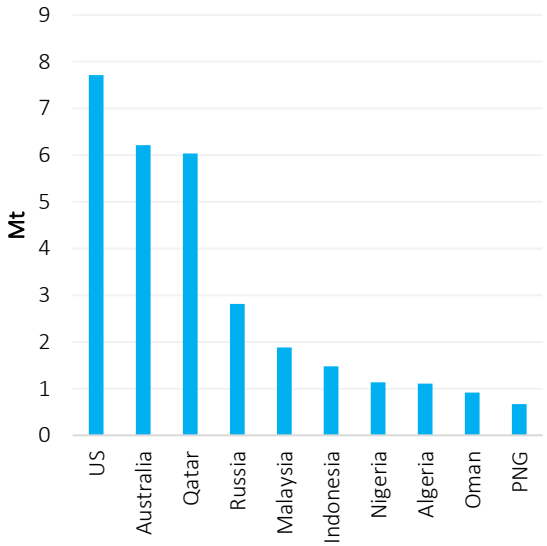


Figure 81: Top 10 LNG exporters in May 2024



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.2.1 GECF

In May 2024, there was a 2.6% y-o-y decline in LNG exports from GECF Member Countries and Observers, amounting to 16.28 Mt (Figure 82). This marks the second consecutive monthly decline compared to the previous year. The decrease in LNG exports was mainly led by Egypt, Malaysia, and Trinidad and Tobago, although this was partially offset by higher LNG exports from Qatar and Russia (Figure 83). For the period January to May 2024, the total LNG exports from the GECF experienced a marginal growth of 0.4% y-o-y, reaching 82.27 Mt.

Lower feedgas availability for LNG exports resulted in the decline of LNG exports from Egypt and Trinidad and Tobago. Malaysia experienced a reduction in LNG exports due to an unplanned outage, caused by a power failure, at the Bintulu LNG facility. Conversely, the increase in Qatar's LNG exports was facilitated by reduced maintenance activity at the Qatargas LNG facility compared to the previous year. Additionally, higher LNG exports from the Vysotsk and Yamal LNG facilities contributed to Russia's increased LNG exports.

Figure 82: Trend in GECF monthly LNG exports

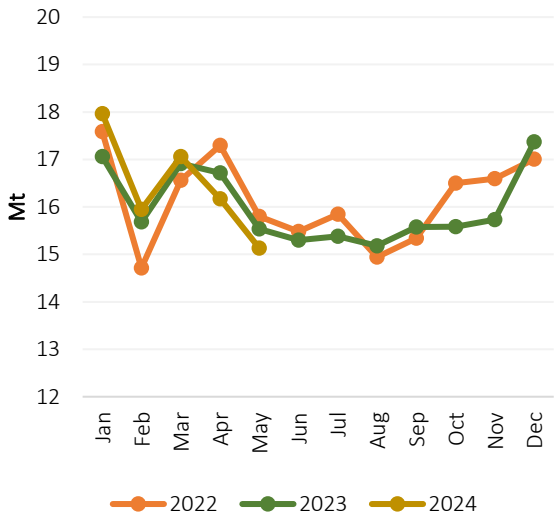
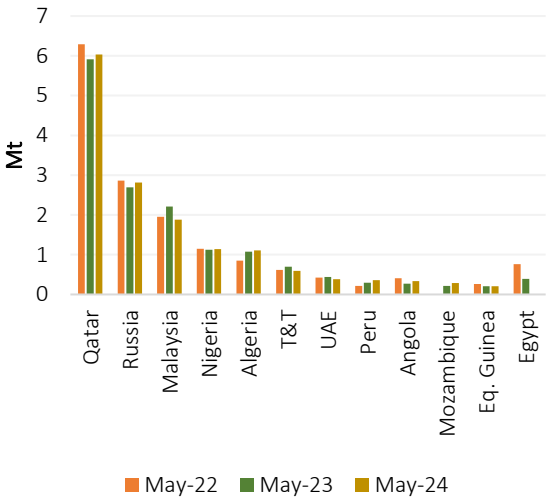


Figure 83: GECF's LNG exports by country



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.2.2 Non-GECF

In May 2024, non-GECF's LNG exports increased by 6.8% (1.13 Mt) y-o-y to reach 17.76 Mt (Figure 84). The US spearheaded this growth, with contributions from Indonesia, Norway and Oman to a lesser extent (Figure 85). Conversely, Cameroon experienced a notable decline in its LNG exports. Between January and May 2024, LNG exports from non-GECF countries rose by 2.9% (2.55 Mt) y-o-y to 90.15 Mt.

In the US, the increase in LNG exports was driven by the ramp-up in production at the Calcasieu Pass LNG facility, reduced maintenance activity at the Corpus Christi LNG facility, and higher exports from the Cameron, Freeport and Sabine Pass LNG facilities. The ramp-up in production at the Tangguh Train 3 LNG facility boosted Indonesia's LNG exports. In Norway and Oman, reduced unplanned and planned maintenance activities compared to the previous year, contributed to the rise in LNG exports. Additionally, Cameroon did not export any LNG in May 2024.

Figure 84: Trend in non-GECF monthly LNG exports

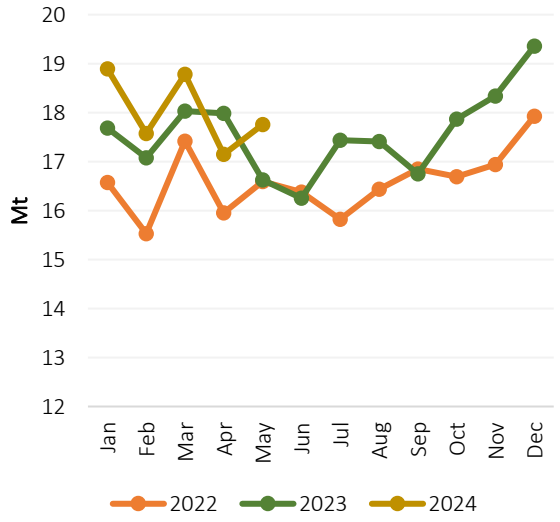
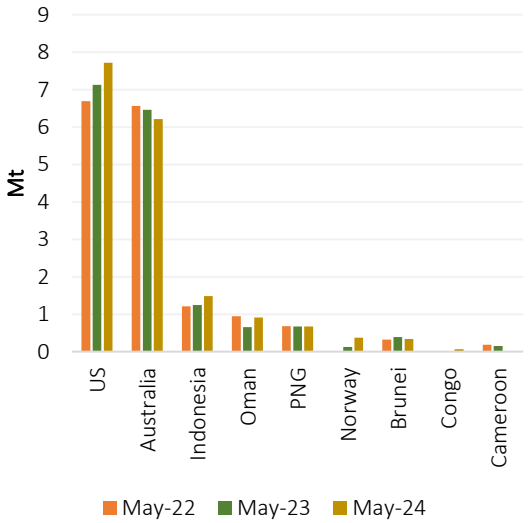


Figure 85: Non-GECF's LNG exports by country



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.3 Global LNG reloads

In May 2024, global LNG reloads recorded the seventh consecutive monthly y-o-y decline, falling by 37% (0.15 Mt) y-o-y to 0.26 Mt (Figure 86). The weaker LNG reloads were driven mainly by Indonesia, Jamaica and Spain, which offset higher LNG reloads in Japan (Figure 87). From January to May 2024, global LNG reloads fell sharply by 57% (1.43 Mt) y-o-y to 1.09 Mt.

In Indonesia, a reduction in intra-country LNG trade and a decline in LNG reloads from the Arun facility, which TotalEnergies and other portfolio players use for LNG storage and reexports, contributed to the overall drop in LNG reloads. Jamaica did not reload any LNG in May due to the cessation of LNG reexports to Puerto Rico. Currently, several LNG cargoes are transhipped in the US Virgin Islands and then delivered to Puerto Rico. Meanwhile, weak LNG demand in Europe led to a decrease in Spain's LNG reloads. Conversely, Japan reloaded an LNG cargo and reexported it to another LNG terminal in the country.

Figure 86: Trend in global monthly LNG reloads

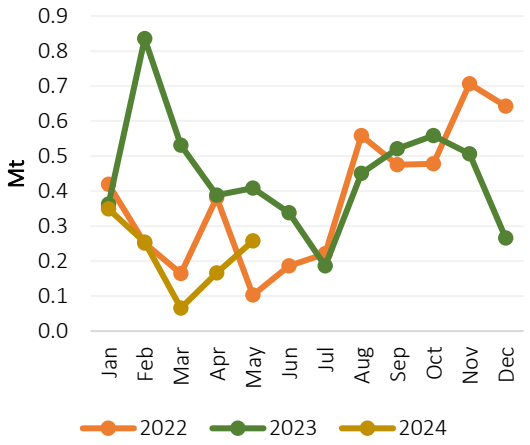
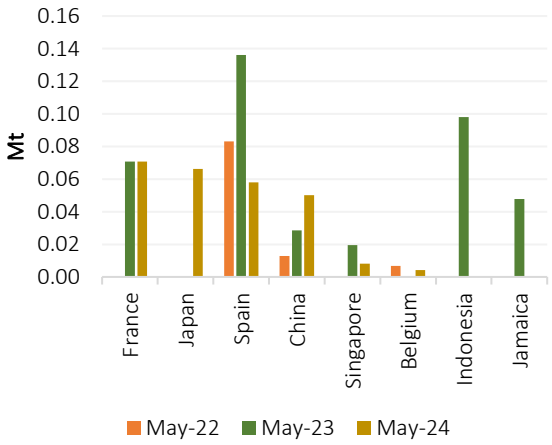


Figure 87: Global LNG reloads by country



Source: GECF Secretariat based on data from ICIS LNG Edge

4.2.4 Arbitrage opportunity

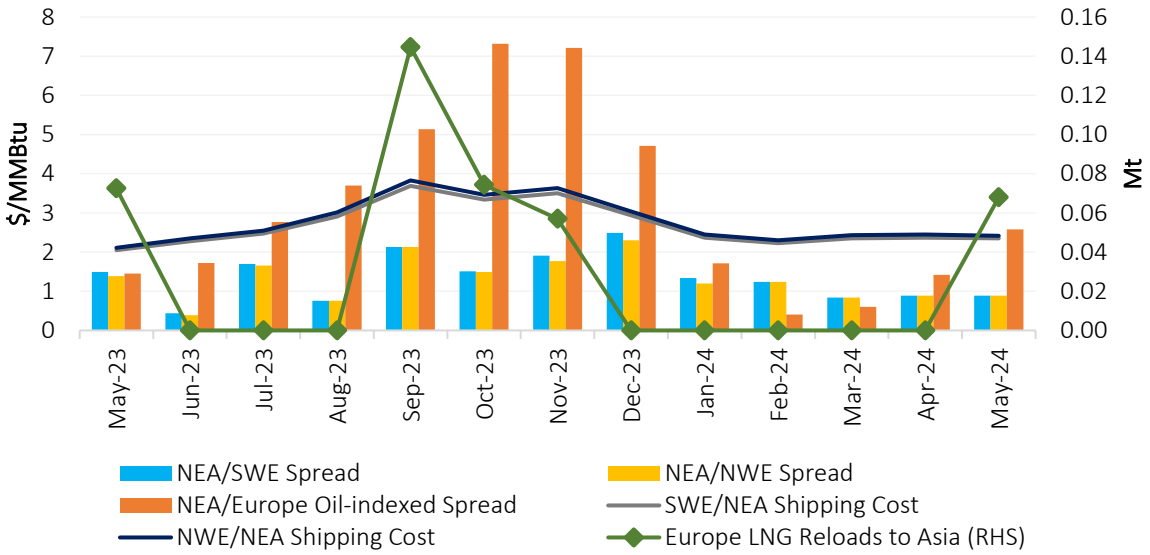
In May 2024, the arbitrage opportunity for LNG reloads from Europe to Asia Pacific remained closed. This was due to the spot LNG shipping costs between both Asia Pacific and Europe maintaining a significant premium over the spot LNG price spreads between both markets (Figure 88). Conversely, the price spread between spot LNG price in Asia Pacific and oil-indexed prices in Europe surpassed the spot shipping cost between Asia Pacific and Europe.

The NEA/SWE and NEA/NWE price spread were unchanged from April 2024 at $0.89/MMBtu each. This was due to the spot LNG prices in Asia Pacific and Europe increasing by the same incremental amount. Meanwhile, the price spread between spot LNG prices in Asia Pacific and oil-indexed prices in Europe jumped by 82% ($1.16/MMBtu) m-o-m to $2.58/MMBtu.

The shipping costs for the NEA/SWE and NEA/NWE spot routes decrease marginally by 0.8% ($0.02/MMBtu) and 1.2% ($0.03/MMBtu) m-o-m to $2.35/MMBtu and $2.42/MMBtu, respectively. However, it's important to note that shipping costs can vary based on the specific vessels used. Medium to long-term chartered vessels may have lower costs compared to spot shipping rates. There were two LNG reloads from Europe to Asia Pacific in May 2024, both from Spain. One standard sized cargo was exported to China while a partial cargo was exported to Japan.

On a y-o-y comparison, the NEA/SWE and NEA/NWE price spreads slumped by 40% ($0.60/MMBtu) and 36% ($0.50/MMBtu). Furthermore, the price spread between NEA spot LNG and European oil-indexed gas prices, as well as the NEA/SWE and NEA/NWE spot shipping costs increased by 78% ($1.13/MMBtu), 15% ($0.30/MMBtu) and 15% ($0.31/MMBtu) y-o-y, respectively.

Figure 88: Price spreads & shipping costs between Asia & Europe spot LNG markets

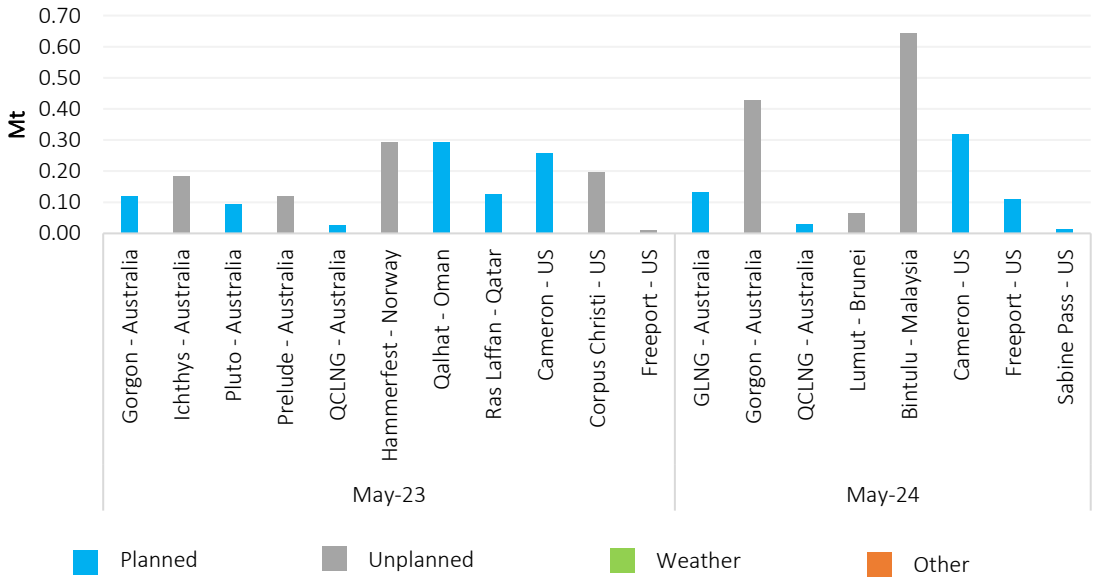


Source: GECF Secretariat based on data from GECF Shipping Model, Argus and ICIS LNG Edge

4.2.5 Maintenance activity at LNG liquefaction facilities

In May 2024, the cumulative impact of scheduled maintenance, unplanned outages and other factors at liquefaction plants globally reached at 1.74 Mt, up marginally from 1.72 Mt a year earlier (Figure 89). The major maintenance activities at liquefaction facilities in May 2024 comprised planned maintenance at the Cameron, Freeport, GLNG, QCLNG and Sabine Pass LNG facilities, along with unplanned outages at the Bintulu, Gorgon and Lumut LNG facilities.

Figure 89: Maintenance activity at LNG liquefaction facilities during April (2023 and 2024)



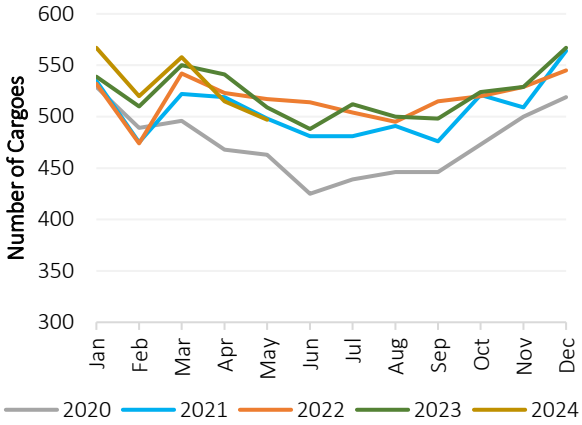
Source: GECF Secretariat based on information from Argus, ICIS LNG Edge and Refinitiv

4.2.6 LNG shipping

In May 2024, there were 497 LNG cargoes exported, which was 3% fewer than the number of shipments in the previous month, and 2% fewer than one year ago (Figure 90). From the start of the year, there have been a total of 2,657 cargoes exported, an increase of just 8 deliveries when compared with the same period in 2023.

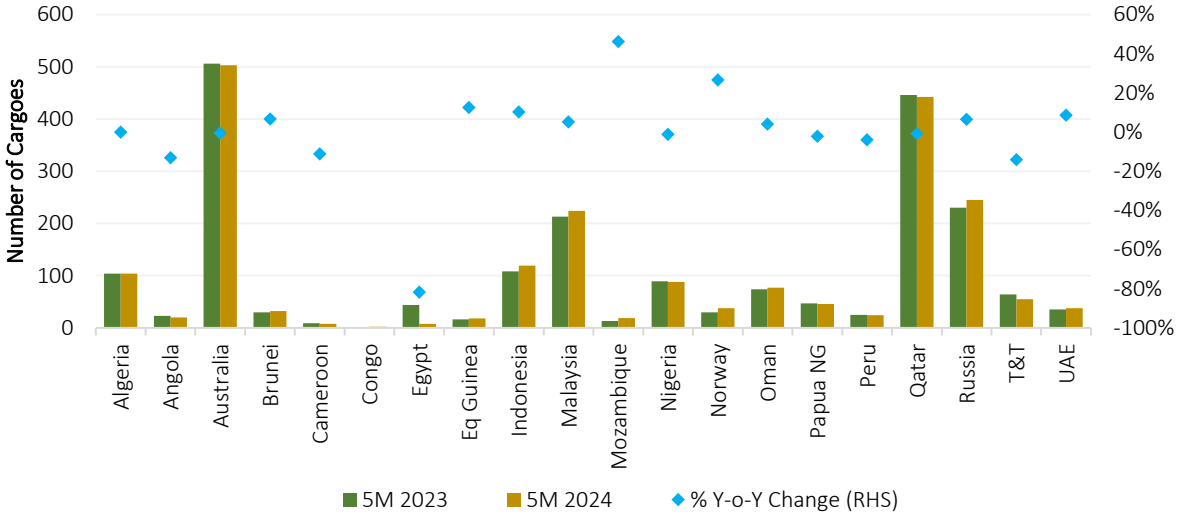
From January to May 2024, there were 15 more cargoes exported by Russia compared with the same period of 2023, while Indonesia delivered 11 more (Figure 91). Mozambique increased its shipments by 46%, followed by Norway by 27%.

Figure 90: Number of LNG export cargoes



Source: GECF Secretariat based on data from ICIS LNG Edge

Figure 91: Changes in LNG cargo exports



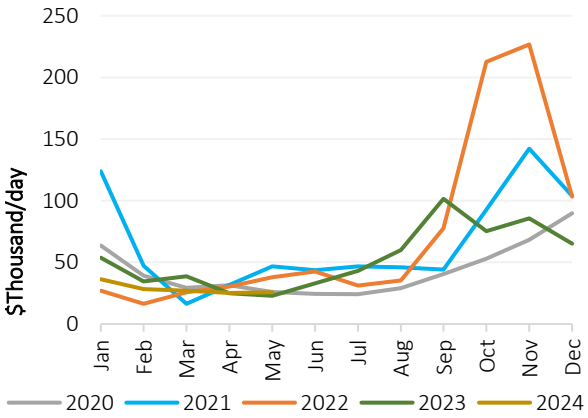
Source: GECF Secretariat based on data from ICIS LNG Edge

The charter market for LNG carriers has been relatively stable since January 2024. In May 2024, the monthly average spot charter rate for steam turbine LNG carriers increased slightly by 2% m-o-m, to reach $25,800 per day (Figure 92). This monthly average charter rate was 13% higher than one year ago but was $8,100 less than the five-year average price for the month. Similarly, in the other segments of the global LNG carrier fleet, there were small increases in the charter rate observed during this month. The average spot charter rate for TDFE vessels rose by 1% m-o-m to reach $36,700 per day, while the average spot charter rate for two-stroke vessels increased by 3% m-o-m to reach $49,100 per day.

The shipping market has remained finely balanced in recent months. Just as in the previous month, the daily charter rate for steam turbine vessels was unchanged for most of May 2024. There was a slight intra-basin arbitrage, which helped to boost charter rates, especially since deliveries between both basins have avoided the Suez and Panama canals in recent months. On the other hand, commissioning of new LNG carriers has placed downward pressure on charter rates.

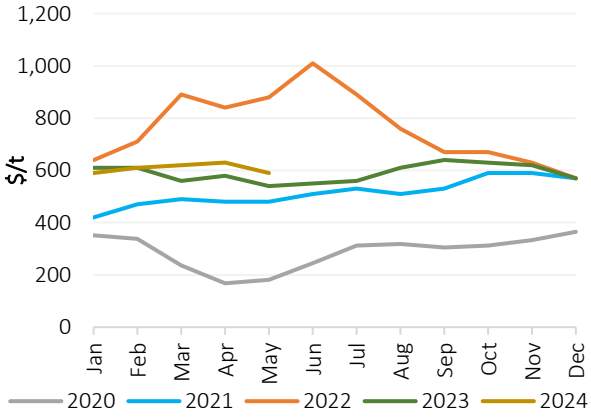
The average price of the shipping fuels was $590 per tonne in May 2024, which was 6% lower m-o-m, but 9% higher y-o-y (Figure 93).

Figure 92: Average LNG spot charter rate



Source: GECF Secretariat based on data from Argus

Figure 93: Average price of shipping fuels

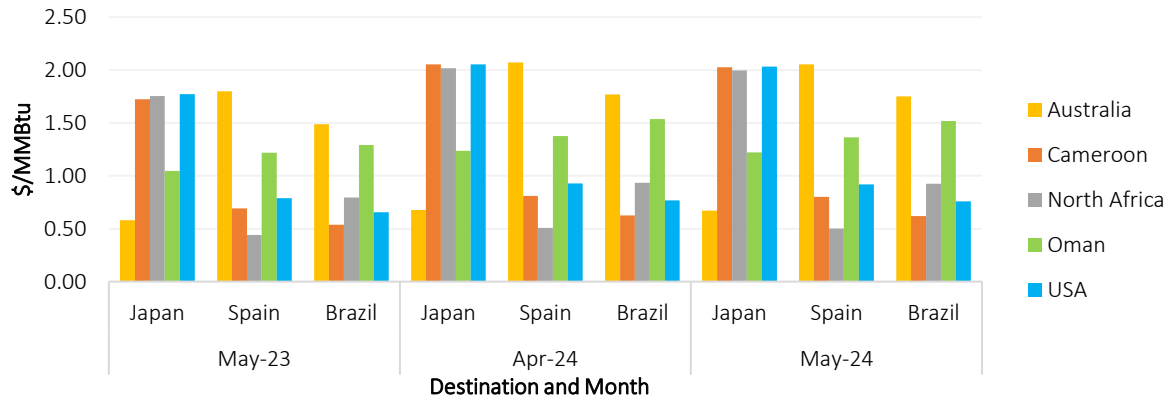


Source: GECF Secretariat based on data from Argus

In May 2024, there were small increases in the average LNG carrier spot charter rate, and in the delivered spot LNG prices relative to the previous month, while the cost of LNG shipping fuels declined. As such, the net effect was a very small decrease in the LNG spot shipping costs for steam turbine carriers relative to the previous month, falling by up to $0.03/MMBtu on certain routes (Figure 94).

Compared with one year ago, the monthly average spot charter rate, the cost of shipping fuels, and the delivered spot LNG prices were all higher in May 2024, resulting in LNG shipping costs of up to $0.30/MMBtu higher than May 2023.

Figure 94: LNG spot shipping costs for steam turbine carriers



Source: GECF Shipping Cost Model

4.2.7 Other developments

ADNOC acquires share in Rio Grande LNG project – The Abu Dhabi National Oil Company (ADNOC) of the United Arab Emirates has acquired an 11.7% share in the first phase of NextDecade's Rio Grande LNG (RGLNG) project in the US. Phase 1 of the RGLNG project includes three trains with a combined capacity of 16.2 Mtpa, and reached a final investment decision (FID) in 2023. The facility will have one of the lowest carbon footprints in the world. This marks ADNOC's first investment in US LNG projects and aligns with its strategy to expand its diversified energy portfolio.

Zhangzhou LNG terminal starts operation – The Zhangzhou LNG terminal in Fujian, China, owned by state-owned China Oil and Gas Pipeline Network (PipeChina), received its commissioning LNG cargo on 21 May 2024. The import terminal has a regasification capacity of 3 Mtpa and is the first LNG terminal to be commissioned in China this year. The commissioning cargo was loaded from the QCLNG facility in Australia and transported aboard the Macoma LNG carrier on 8 May 2024.

Contractor for the Golden Pass LNG facility files for bankruptcy – Zachry Holdings, the primary contractor for the $10 billion Golden Pass LNG facility in the US, has filed for Chapter 11 bankruptcy due to cost challenges associated with the project. The contractor's stake in the project development was $5.8 billion. Golden Pass LNG, a facility with a capacity of 18 Mtpa, is owned by QatarEnergy (70%) and Exxon Mobil (30%). Originally built as an LNG import terminal, it is being converted to an export terminal. The facility was expected to commence exports in the first half of 2025, but this recent development may affect the start of operations.

UK's National Grid plans to sell its Isle of Grain LNG terminal – National Grid has announced plans to sell its 14.8 Mtpa Isle of Grain LNG terminal in the UK as part of its strategy to invest in energy networks in the UK and US and to focus more on the energy transition. Recently, National Grid initiated a competitive auction for regasification capacity at the Isle of Grain terminal, resulting in Sonatrach and Venture Global each securing long-term access to 3 Mtpa of LNG storage and regasification capacity.

Qatar signs shipbuilding order with China: Following speculation earlier in the year about QatarEnergy negotiating with China's State Shipbuilding Corporation, it has now been formally announced that both parties have signed off on a shipbuilding order for eighteen vessels, valued at $6 billion in total. Each of these LNG carriers will be designated under a new expanded QC-Max size classification. At a capacity of 271,000 m3 each, these would now be the largest LGN carriers on the market. Eight of the vessels will be delivered in 2028 and 2029, while the remainder will be delivered in 2030 and 2031.

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

Table 1: New LNG sale agreements signed in May 2024

Contract Type	Exporting Country	Project	Seller	Importing Country	Buyer	Volume (Mtpa)	Duration (Years)
HOA	UAE	Ruwais LNG	ADNOC	Germany	EnBW	0.6	15
SPA	Portfolio		TotalEnergies	India	Indian Oil Corp.	1	10
SPA	US	Rio Grande	NextDecade	Portfolio	ADNOC	1.9	20
SPA	Portfolio		Santos	Japan	Hokkaido	0.4	10
SPA	Portfolio		Vitol	South Korea	KOMIPO	0.2	3
HoA	US	Driftwood LNG	Tellurian	Portfolio	Aethon	2	20

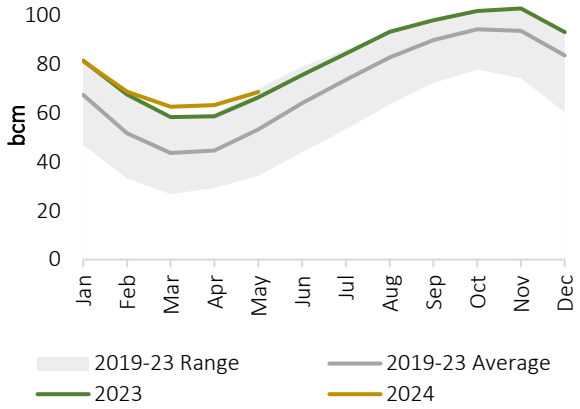
Source: GECF Secretariat based on Project Updates and News

5 Gas Storage

5.1 Europe

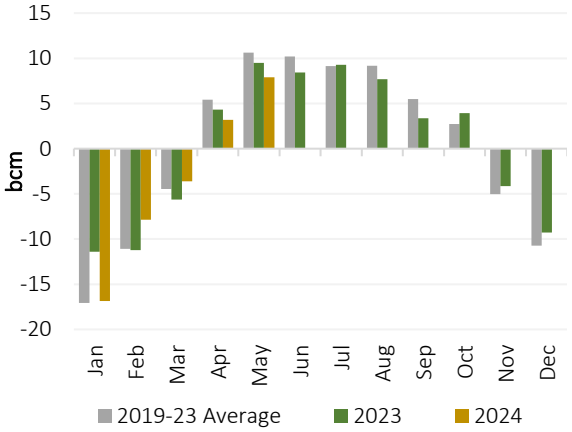
The countries of the EU are currently progressing through the net gas injection season. In May 2024, the average daily volume of gas in underground storage in the EU increased to 68.5 bcm, up from 63.2 bcm one month prior (Figure 95). Accordingly, the average capacity utilisation of UGS sites in the region rose to 66%. The monthly average quantity of gas in storage has now returned to within the five-year historical range, but is still the second highest on record for the month of May. Compared with the previous year, there was 2.2 bcm more gas in storage than the average level recorded in May 2023. Furthermore, the delta between the gas storage level in May 2024 and the five-year average for the month narrowed to 15.3 bcm.

Figure 95: Monthly average UGS level in the EU



Source: GECF Secretariat based on data from AGSI+

Figure 96: Net gas injections in the EU

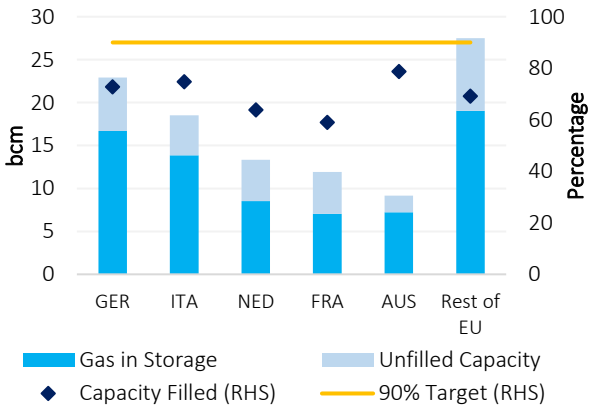


Source: GECF Secretariat based on data from AGSI+

Gas injections have picked up in May 2024. Over the course of the month, there was 7.9 bcm of net gas injections recorded across the region, with 8.8 bcm of gas injected into the UGS sites, and just 0.9 bcm taken out of storage (Figure 96). Since the start of the net gas injection season until the end of May 2024, there has been a total of 11.3 bcm of net gas injected into storage across the region.

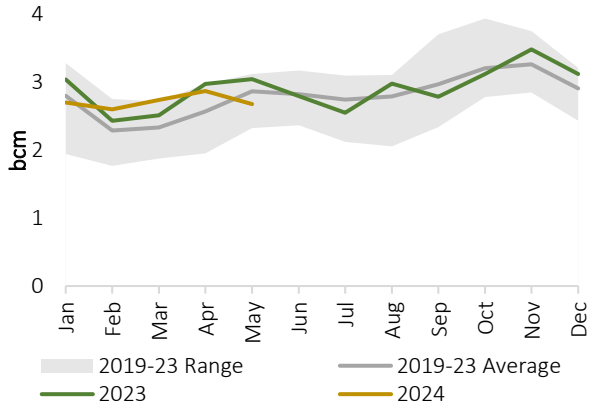
By the end of May 2024, the average storage level in Austria stood at 79%, followed by Italy at 75%, and Germany at 73% (Figure 97). The combined amount of LNG stored in the EU countries in May 2024 reached 2.7 bcm (Figure 98). This represented a 7% decline m-o-m, and was 7% lower than the five-year historical average for the month.

Figure 97: UGS in EU countries as of May 31, 2024



Source: GECF Secretariat based on data from AGSI+

Figure 98: Total LNG storage in the EU



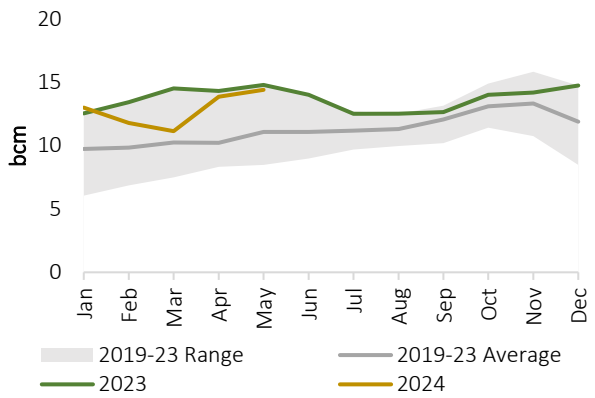
Source: GECF Secretariat based on data from ALSI

5.2 Asia

Japan and South Korea possess a combined capacity of 17 bcm of LNG storage. In May 2024, the combined volume of LNG in storage in both countries continued to climb, increasing by 4% m-o-m to an estimated 14.4 bcm (Figure 99).

While this volume was 3% lower y-o-y, it remained 3.3 bcm higher than the five-year average for the month. Storage in Japan and South Korea accounted for 7.5 bcm and 6.9 bcm, respectively.

Figure 99: LNG in storage in Japan and South Korea



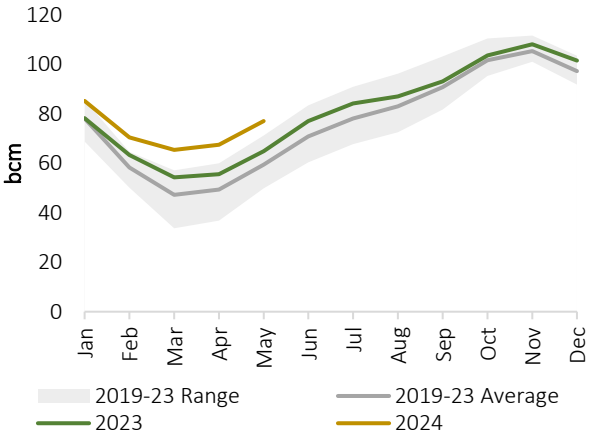
Source: GECF Secretariat based on data from Refinitiv

5.3 North America

The US is continuing to observe healthy gas injections, despite recording storage levels being notably higher than the five-year range. In May 2024, the average daily volume of gas in storage in the US increased to 77.0 bcm, up from 67.4 bcm in the previous month (Figure 100). As a result, the average capacity utilisation of the UGS sites in the country rose to 57%.

There was 12.1 bcm more gas in storage than one year ago, and 17.5 bcm more than the five-year average. The total gas stored during the 2024 restocking season in the US thus far has reached 18.0 bcm.

Figure 100: Monthly average UGS level in the US



Source: GECF Secretariat based on data from US EIA

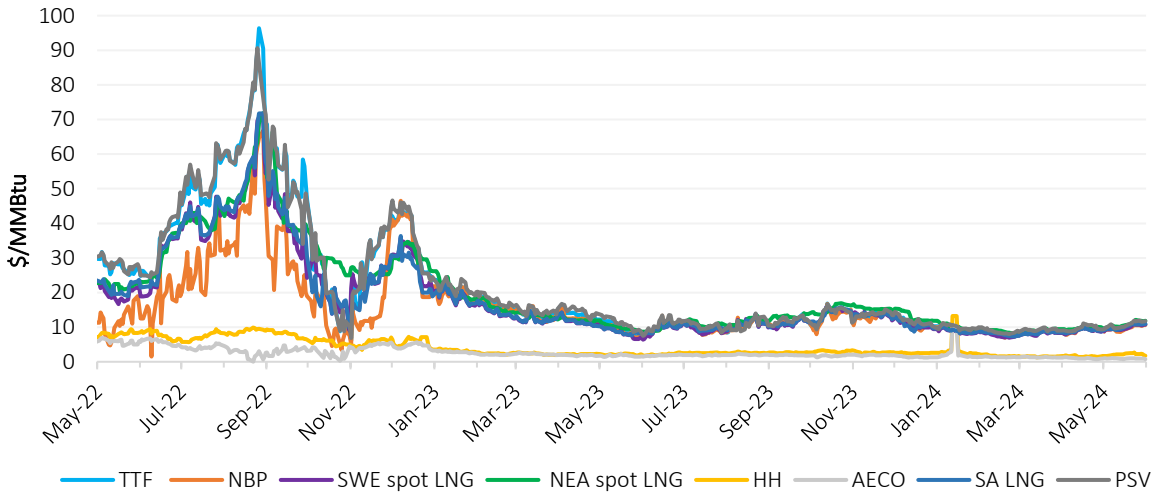
6 Energy Prices

6.1 Gas prices

6.1.1 Gas & LNG spot prices

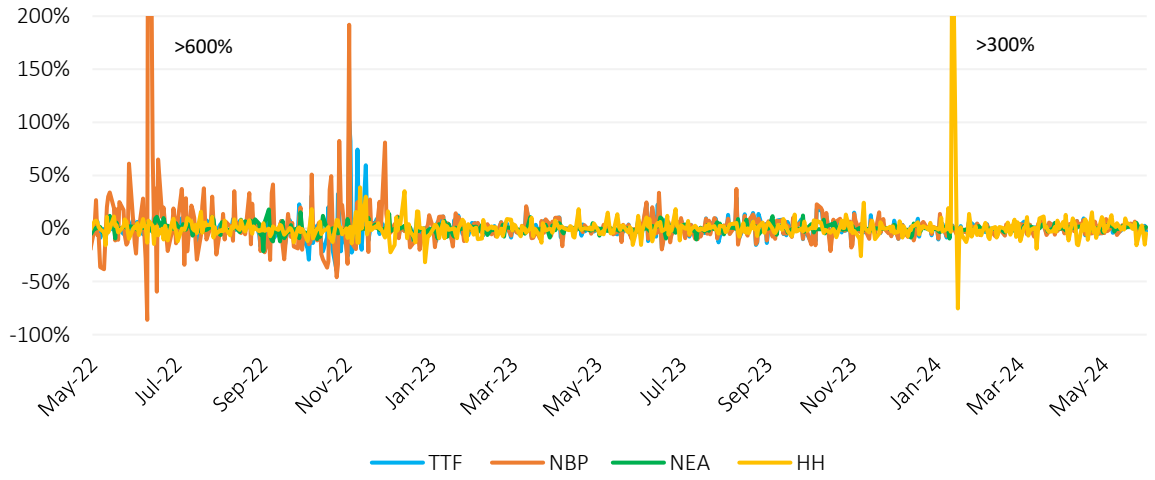
In May 2024, gas and LNG spot prices in Europe and Asia experienced an increase for the third consecutive month, but with volatility remaining relatively low (Figure 101 and Figure 102). Ongoing geopolitical instability and outages at several LNG facilities including Australia's Gorgon LNG, Malaysia's Bintulu and the US Cameron LNG facilities drove the bullish trend in both regions. Additionally, emerging demand in Northeast Asia further boosted prices. Spot prices are likely to remain supported by increasing demand from buyers in South and Southeast Asia, coupled with continuing geopolitical uncertainties.

Figure 101: 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 102: Daily variation of spot prices

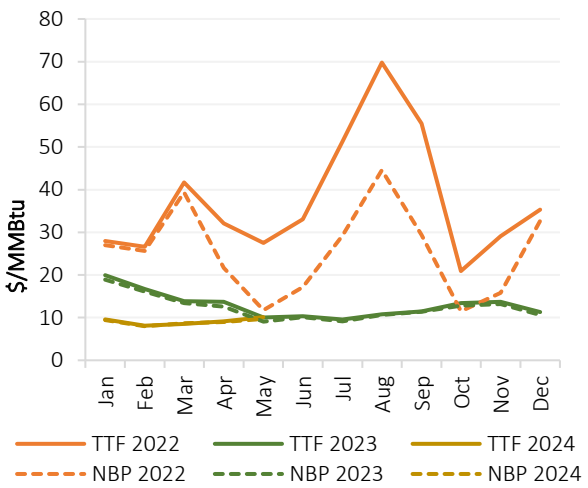


Source: GECF Secretariat based on data from Argus and Refinitiv Eikon

6.1.1.1 European spot gas and LNG prices

In May 2024, TTF spot gas prices averaged $10.11/MMBtu, reflecting an 11% increase m-o-m and a 1% increase y-o-y. In addition, NBP spot prices averaged $9.70/MMBtu, reflecting an 8% increase m-o-m and a 7% increase y-o-y (Figure 103). The SWE spot LNG prices averaged $9.92/MMBtu in May 2024 (12% increase m-o-m and 17% increase y-o-y). In addition, the PSV spot price averaged $10.69/MMBtu (10% increase m-o-m and 3% decrease y-o-y).

Figure 103: Monthly European spot gas prices



Source: GECF Secretariat based on data from Refinitiv Eikon

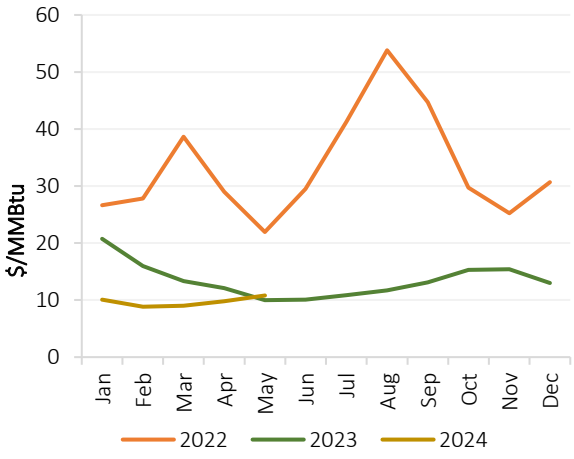
European gas and LNG spot prices continued to climb for the third consecutive month, driven by ongoing geopolitical instability and supply constraints due to outages and planned maintenance activities in Norway. Further exacerbating the bullish market sentiment were outages at other LNG facilities, including Australia's Gorgon LNG, Malaysia's Bintulu and the US Cameron LNG facilities. Daily TTF spot prices rose to a five-month high of $11.31/MMBtu during this period.

For the period January to May 2024, TTF and NBP averaged $9.08/MMBtu and $8.96/MMBtu, respectively, representing substantial declines of 39% and 36% y-o-y, respectively.

6.1.1.2 Asian spot LNG prices

In May 2024, the average Northeast Asia (NEA) spot LNG price experienced an increase of 11% m-o-m, reaching an average of $10.81/MMBtu. This represents an 8% increase y-o-y (Figure 104).

Figure 104: Monthly Asian spot LNG prices



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

Asian LNG prices rose for the third consecutive month, primarily driven by Northeast Asian buyers, particularly Japan and South Korea, seeking to replenish LNG storage ahead of the summer season. Additionally, supply-side uncertainties due to ongoing outages at several LNG facilities contributed to the upward trend. Daily NEA spot LNG prices rose to a five-month high at $12.15/MMBtu during this period.

For the period January to May 2024, the average NEA spot LNG price stood at $9.71/MMBtu, representing a decline of 33% y-o-y.

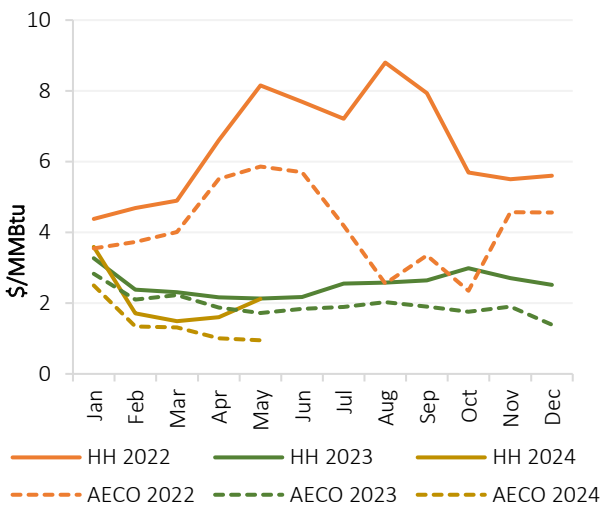
6.1.1.3 North American spot gas prices

In May 2024, the HH spot gas price averaged $2.12/MMBtu, reflecting a significant increase of 33% m-o-m. Additionally, it was at the same level as the average price observed in May 2023 (Figure 105).

Henry Hub prices reversed the previous months' losses, reaching a four-month high. This notable increase was primarily driven by higher demand for gas in the power sector, coupled with a decline in domestic gas production. Furthermore, daily HH spot prices rose sharply reaching a high of $2.64/MMBtu.

Meanwhile, in Canada, the AECO spot price averaged $0.95/MMBtu in May 2024, reflecting a decrease of 6% m-o-m and 45% y-o-y.

Figure 105: Monthly North American spot gas prices



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

For the period January to May 2024, the HH spot price averaged $2.10/MMBtu, representing a decline of 14% y-o-y. Meanwhile, the AECO spot price averaged $1.42/MMBtu, marking a decrease of 34% y-o-y.

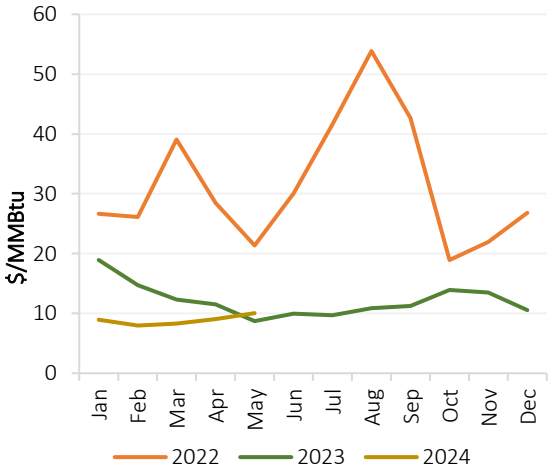
6.1.1.4 South American spot LNG prices

In May 2024, the South American (SA) LNG price experienced a 11% m-o-m increase, averaging $10.04/MMBtu. Additionally, the SA LNG price was 15% higher compared to the average price of $8.71/MMBtu observed in May 2023 (Figure 106).

LNG spot prices in South America continued to align with the trends observed in European and Asian spot prices. The average delivered prices for LNG in Argentina, Brazil and Chile averaged $10.03/MMBtu, $9.88/MMBtu and $10.20/MMBtu, respectively.

For the period January to May 2024, the SA LNG spot price averaged $8.87/MMBtu, representing a decline of 33% y-o-y.

Figure 106: 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 May 2024, the average Oil-indexed I LNG price was $12.74/MMBtu, remaining at relatively the same level m-o-m and y-o-y. Similarly, the Oil-indexed II LNG price averaged $10.25/MMBtu, reflecting a 2% increase m-o-m and a 6% increase y-o-y (Figure 107). Furthermore, Oil-indexed I prices traded an average premium of $2/MMBtu over NEA spot LNG prices. Additionally, Oil-indexed II prices held a discount of $1/MMBtu over the NEA spot LNG prices.

In Europe, the Oil-indexed III price averaged $8.23/MMBtu in May 2024, reflecting declines of 1% m-o-m and 6% y-o-y (Figure 108). Moreover, the average Oil-indexed III price held a discount of $2/MMBtu over the average SWE LNG price.

From January to May 2024, the Oil-indexed I LNG price exhibited a 4% decrease y-o-y, while the Oil-indexed II LNG price showed a 1% increase y-o-y. Additionally, the Oil-indexed III LNG price for the same period was 8% lower y-o-y.

Figure 107: Asia: Spot and oil-indexed price spread

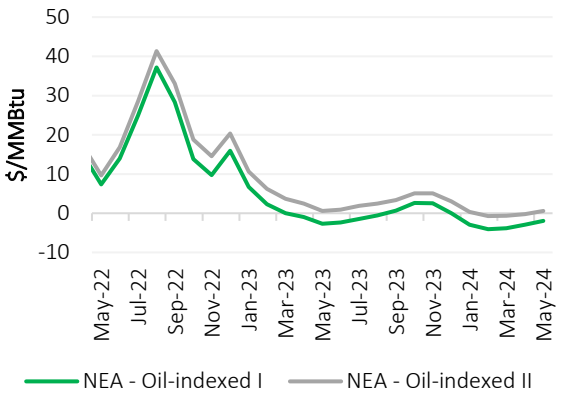
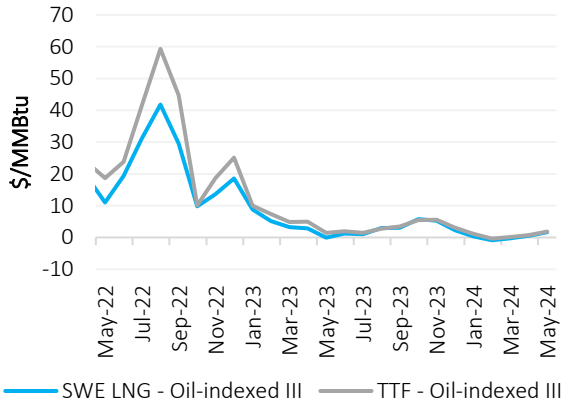


Figure 108: Europe: Spot and oil-indexed price spread



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

6.1.3 Regional spot gas & LNG price spreads

In May 2024, the NEA-TTF price spread remained positive, and increased slightly compared to the previous month. The average premium of NEA LNG spot price over the average TTF spot price was $0.70/MMBtu (Figure 109).

NBP traded at a discount of $0.41/MMBtu compared to TTF, increasing from the previous month (Figure 110). The negative NBP-TTF spread reflected a loosened UK gas market balance and incentivised pipeline gas exports to Northwest Europe.

Furthermore, the NWE LNG-TTF spread remained negative; however, the NWE LNG spot price trading at a smaller discount of $0.19/MMBtu compared to TTF, indicating lower LNG sendout in the region (Figure 111). The NWE LNG-SA LNG price spread was negative, averaging $0.12/MMBtu (Figure 112). Meanwhile, the NEA-HH and TTF-HH spreads both widened to $8.69/MMBtu and $7.99/MMBtu, respectively (Figure 113 and Figure 114). The premium of the Asian and European spot prices over North American spot prices increased during the month.

Figure 109: NEA-TTF price spread

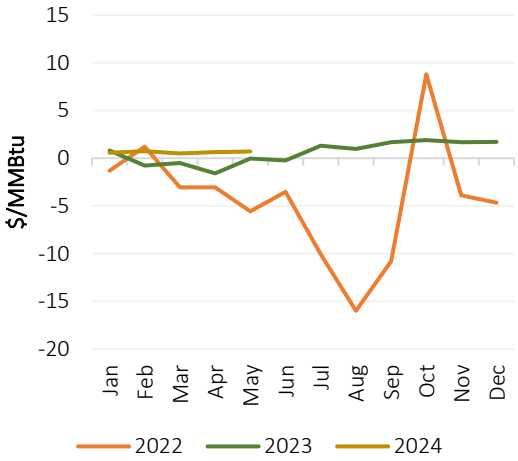


Figure 110: NBP-TTF price spread

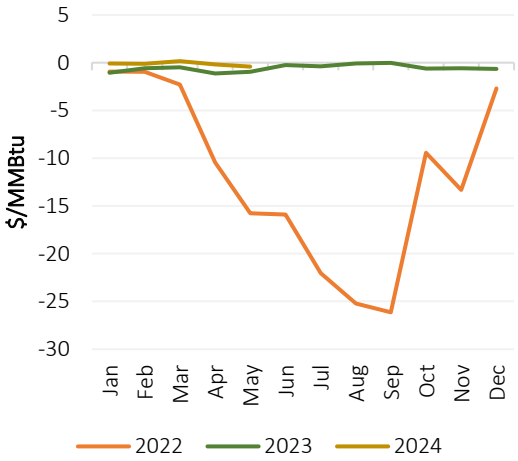


Figure 111: NWE LNG-TTF price spread

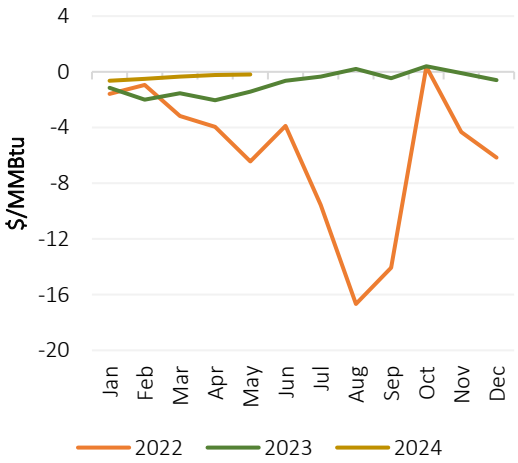


Figure 112: NWE LNG – SA LNG price spread

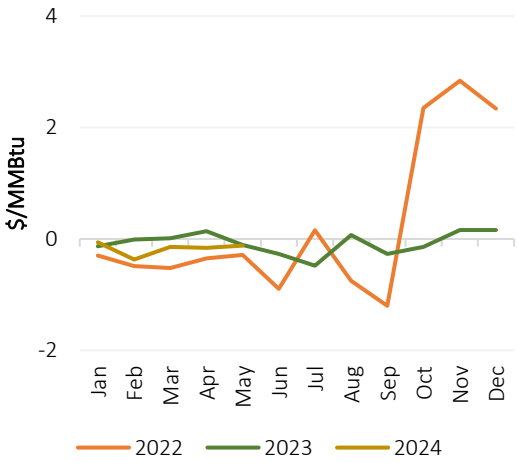


Figure 113: NEA-HH price spread

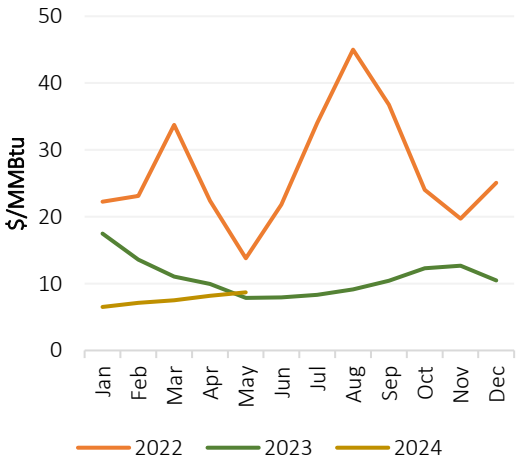
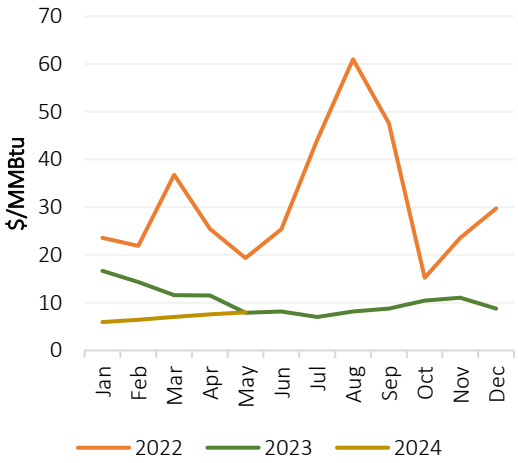


Figure 114: TTF-HH price spread



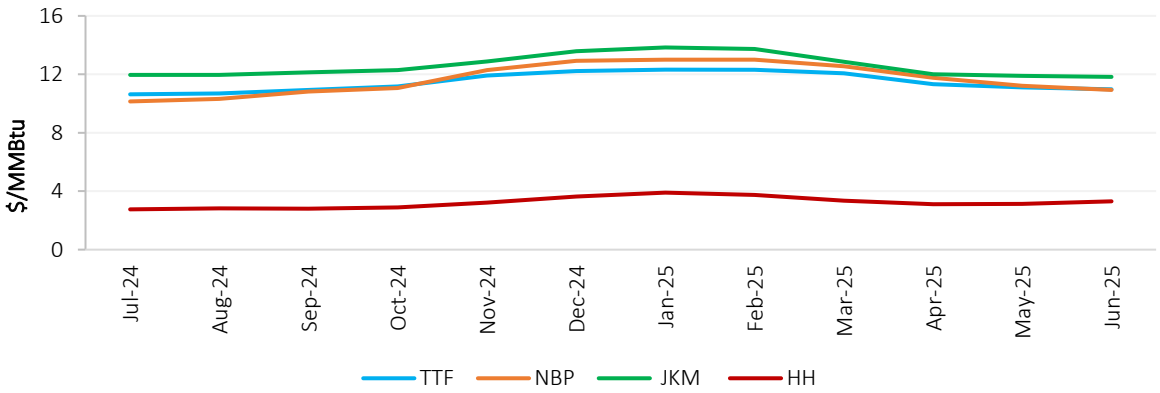
Source: GECF Secretariat based on data from Argus and Refinitiv Eikon

6.1.4 Gas & LNG futures prices

For the six-month period spanning July to December 2024, the JKM-TTF futures price spread is expected to be positive, indicating the likelihood for Asian LNG prices to maintain a premium over European spot prices. Over this period, JKM is expected to trade at a marginal average premium of $1.2/MMBtu compared to TTF. Additionally, the NBP-TTF spread is expected to be slightly negative from July to October 2024, with TTF expected to maintain an average premium of $0.3/MMBtu over NBP spot prices (Figure 115).

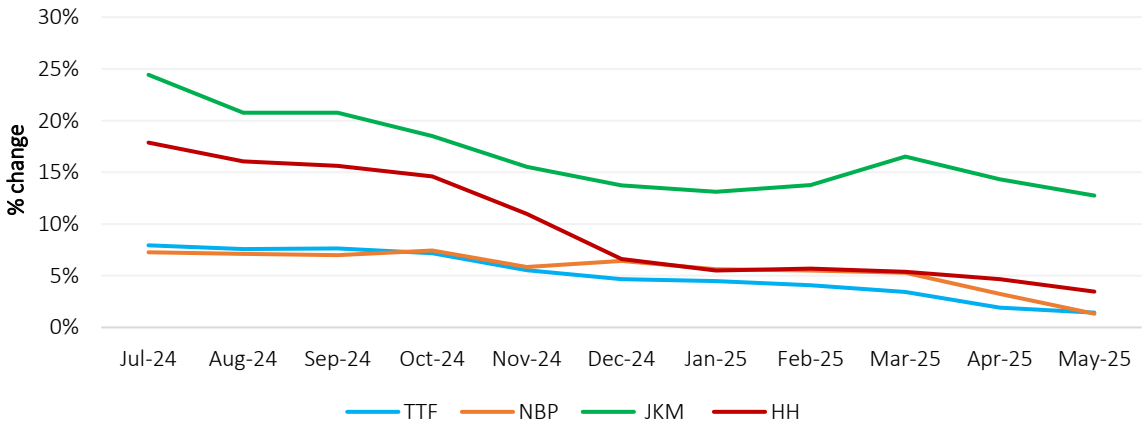
Moreover, as of June 6, 2024, the average futures prices for TTF, NBP and JKM during the same six-month period are $11.26/MMBtu, $11.26/MMBtu and $12.47/MMBtu, respectively. Furthermore, gas and LNG futures prices for TTF, NBP and JKM for the six-month period from July to December 2024, (as of June 6, 2024) are higher than the futures prices expectations considered on May 8, 2024 (as reported in the GECF MGMR May 2024, Additionally, the average Henry Hub futures price is $3.02/MMBtu, which is also higher than previous expectations (Figure 116).

Figure 115: Gas & LNG futures prices



Source: GECF Secretariat based on data from Refinitiv Eikon
Note: Futures prices as of June 6, 2024.

Figure 116: Variation in gas & LNG futures prices



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

6.2 Cross commodity prices

6.2.1 Oil prices

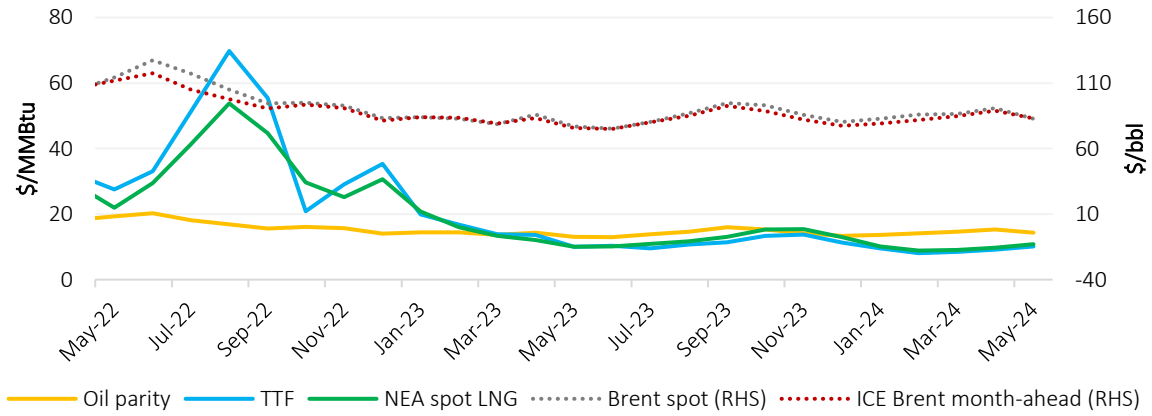
In May 2024, the average Brent spot price was $82.86/bbl, reflecting a decline of 9% m-o-m but remained 8% higher y-o-y (Figure 117). The Brent month-ahead price averaged $83.00/bbl, marking a 7% decrease m-o-m and a 10% increase y-o-y.

Oil prices declined after recording a four-month climb, amidst demand growth uncertainties and high inventories. In the US, persistent inflation continues to weigh on consumer and industrial demand. Additionally, on June 2, 2024, OPEC+ agreed to extend existing cuts of 3.66 million bbl/d until the end of 2025. Voluntary production cuts from some member countries, totalling 2.2 million bbl/d and initially set to end in June 2024, were extended until September 2024. These cuts will then be phased out over a year from October 2024 to September 2025.

Furthermore, in May 2024, TTF spot prices traded at a discount of $4/MMBtu to the oil parity price. Similarly, NEA LNG spot prices maintained a discount of $4/MMBtu to the oil parity price.

From January to May 2024, the average Brent spot price was $85.73/bbl, representing a 5% increase y-o-y. Similarly, the average Brent month-ahead price was $83.51/bbl, representing a 3% increase y-o-y.

Figure 117: 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

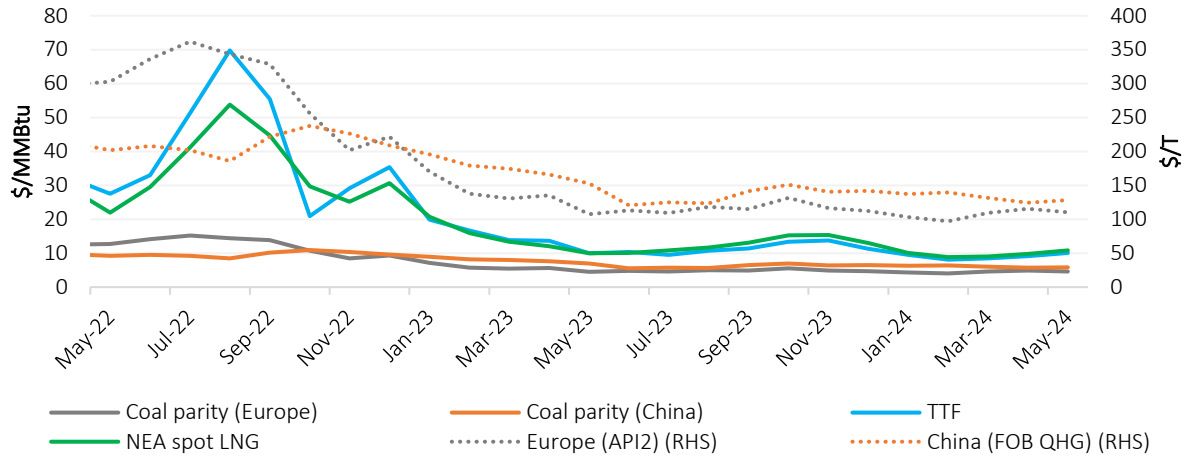
In May 2024, the European coal price (API2) averaged $110.20/T, decreasing by 5% m-o-m, but was 3% higher y-o-y. Meanwhile, in China, the QHG coal price averaged $128.07/T, reflecting a 3% increase m-o-m and a 16% decrease y-o-y (Figure 118).

European coal prices declined due to softened demand, particularly in Germany, along with a rebound in US coal exports, which are nearly back to the levels prior to the Baltimore Bridge collapse. Meanwhile, Chinese coal prices increased after a nine-month decline, driven by stockpiling ahead of the summer season.

The premium of TTF spot price over the API2 parity price increased by 28% to $5/MMBtu in May 2024. Additionally, the premium of NEA spot LNG price over the QHG parity price increased by 21% m-o-m to $5/MMBtu.

From January to May 2024, the European API2 averaged $107.10/T, representing a 21% decrease y-o-y. Meanwhile, the Chinese QHG price averaged $132.25/T, which was 24% lower y-o-y.

Figure 118: 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.

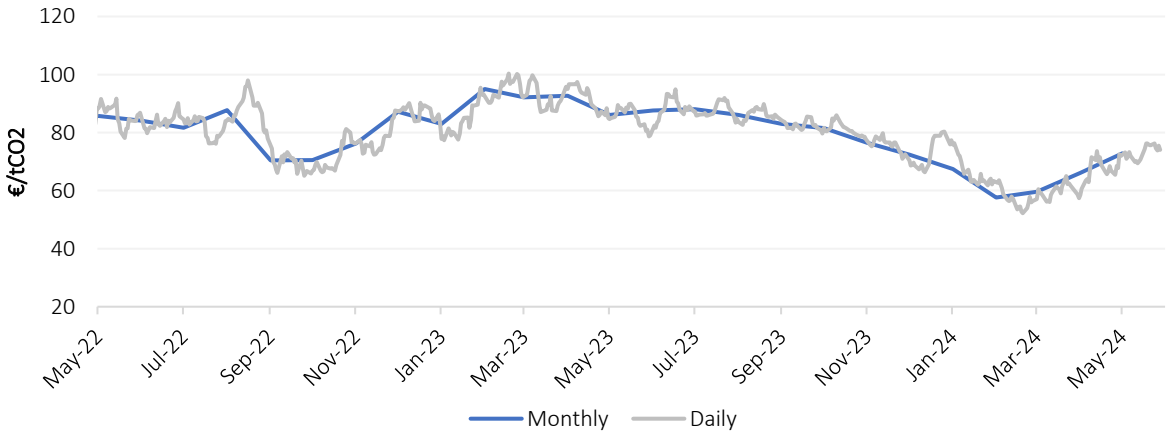
6.2.3 Carbon prices

In May 2024, EU carbon prices averaged €72.87/tCO_2, reflecting a 10% increase m-o-m, and a 15% decline y-o-y (Figure 119).

EU carbon prices rose for the third consecutive month, with daily prices reaching a four-month high of €76/tCO_2. This increase was supported by gains in TTF spot prices.

For the period January to May 2024, EU carbon prices averaged €64.72/tCO2, representing a decline of 28% y-o-y.

Figure 119: EU carbon prices

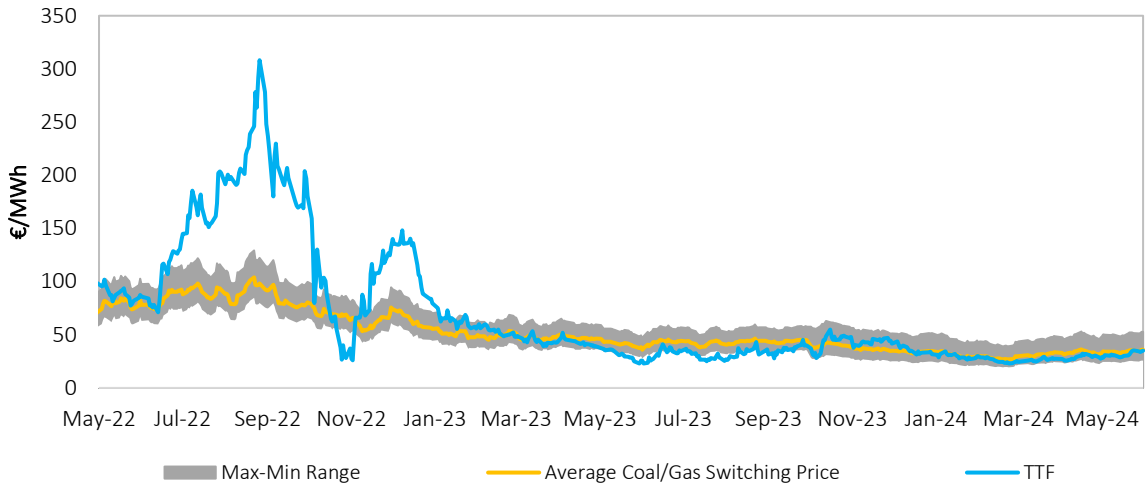


Source: GECF Secretariat based on data from Refinitiv Eikon

6.2.4 Fuel switching

In May 2024, daily TTF spot prices stayed within the range that is favourable for coal-to-gas switching. The average coal-to-gas switching price experienced an increase of 3% m-o-m to reach €34.31/MWh. The TTF spot prices also increased during the month. Notably, the average monthly spread between the TTF spot price and the coal-to-gas switching price remained negative but decreased compared to the previous month, averaging -€3/MWh (Figure 120). Looking ahead to July 2024, the TTF spot price is likely to remain below the average coal-to-gas switching price, incentivising coal-to-gas switching in Europe.

Figure 120: Daily TTF vs coal-to-gas switching prices



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

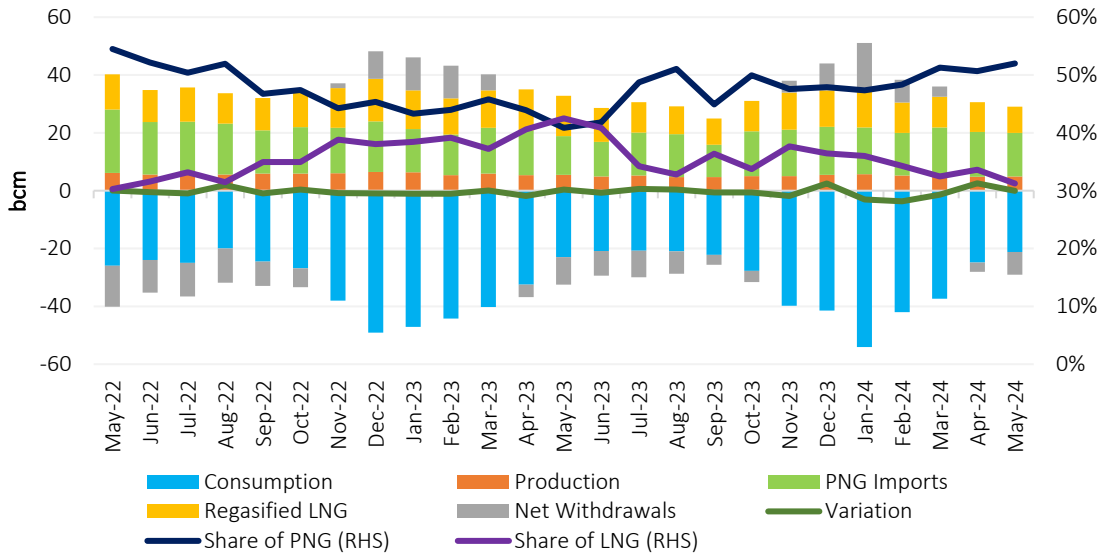
Annexes

Gas Balance

1) EU + UK

In May 2024, the share of regasified LNG in the gas supply for the EU and UK sub-region declined to 31% from 34% in the previous month, and significantly from 43% in May 2023. Conversely, the share of pipeline gas imports in the EU and UK's gas supply increased slightly from 51% in April 2024 to 52% in May 2024, and markedly from 41% during the same period in 2023 (Figure 121). The m-o-m decrease in the share of regasified LNG send-out in the supply balance was due to the LNG send-out reduction being greater than the drop in pipeline gas imports. Additionally, led to the sharp y-o-y decline in the share of regasified LNG in the gas balance, while stronger pipeline gas imports boosted its share in the gas supply.

Figure 121: 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 May 2024.

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

	2023	May-23	May-24	YTD 2023	YTD 2024	Change* y-o-y	Change** 2024/2023
(a) Gas Consumption	380.85	23.00	21.20	187.00	179.55	-8%	-4%
(b) Gas Production	63.46	5.47	4.87	28.46	25.96	-11%	-9%
Difference (a) - (b)	317.39	17.54	16.33	158.54	153.60	-7%	-3%
PNG Imports	174.88	13.43	15.12	73.74	78.16	13%	6%
Regasified LNG	143.59	13.97	9.08	66.92	52.65	-35%	-21%
Net Withdrawals	-4.86	-9.50	-7.88	14.39	17.26	-17%	20%
Variation	3.78	-0.36	0.01	3.49	5.53		

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

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

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

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

	2023	Mar-23	Mar-24	Q1 2023	Q1 2024	Change* y-o-y	Change** 2024/2023
(a) OECD Gas Consumption	1769.4	167.7	159.2	527.5	530.8	-5.0%	0.6%
(b) OECD Gas Production	1699.8	145.6	145.1	422.4	430.0	-0.3%	1.8%
Difference (a) - (b)	69.6	22.1	14.2	105.1	100.8	-35.9%	-4.1%
OECD LNG Imports	329.9	27.9	24.6	89.9	80.4	-11.9%	-10.5%
LNG Imports from GECF	140.8	12.6	11.1	40.4	35.1	-11.8%	-13.0%
LNG Imports from Non-GECF	189.1	15.3	13.5	49.5	45.3	-12.0%	-8.5%
OECD LNG Exports	238.4	20.6	21.1	59.1	62.9	2.6%	6.4%
Intra-OECD LNG Trade	154.9	12.0	10.8	38.0	37.1	-10.1%	-2.4%
OECD Pipeline Gas Imports	499.2	46.8	42.8	140.0	132.1	-8.5%	-5.7%
OECD Pipeline Gas Exports	480.2	42.5	39.6	129.1	119.5	-6.9%	-7.4%
Stock Changes and losses	40.9	-10.5	-7.4	-63.4	-70.6		

Source: GECF Secretariat based on data from ICIS LNG Edge and IEA Monthly Gas Statistics
(*): y-o-y change for Mar 2024 compared to Mar 2023
(**): y-o-y change for Q1 2024 compared to Q1 2023

3) India

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

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

	2023	Apr-23	Apr-24	YTD 2023	YTD 2024	Change* y-o-y	Change** 2023/2022
(a) India Gas Consumption	62.15	5.19	5.52	19.88	21.94	6.4%	10.4%
(b) India Gas Production	35.09	2.67	2.91	11.07	11.95	8.8%	8.0%
Difference (a) - (b)	27.06	2.51	2.61	8.81	9.99	3.7%	13.4%
India LNG Imports	30.27	2.78	2.75	9.01	11.51	-1.3%	27.7%
LNG Imports from GECF	23.57	2.31	1.98	7.44	9.03	-14.4%	21.5%
LNG Imports from Non-GECF	6.70	0.47	0.77	1.57	2.48	62.1%	57.4%
Stock Changes and losses	3.21	0.27	0.14	0.20	1.52		

Source: GECF Secretariat based on data from ICIS LNG Edge and India's PPAC
(*): y-o-y change for Apr 2024 compared to Apr 2023
(**): y-o-y change for YTD 2024 compared to YTD 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
LT	Long term
MMBtu	Million British thermal units
mmcm	Million cubic metres
MENA	Middle East and North Africa
METI	Ministry of Trade and Industry in Japan
m-o-m	month-on-month
Mt	Million tonnes
Mtpa	Million tonnes per annum
MWh	Megawatt hour
NEA	North East Asia
NBP	National Balancing Point
NDC	Nationally Determined Contribution
NGV	Natural Gas Vehicle
NZBA	Net-Zero Banking Alliance
OECD	Organization for Economic Co-operation and Development
PNG	Pipeline Natural Gas

PPAC	Petroleum Planning & Analysis Cell
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
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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