



Global & Regional Market Analysis

NATURAL GAS, 2024 March

17/04/2024

STORIES OF THE MONTH

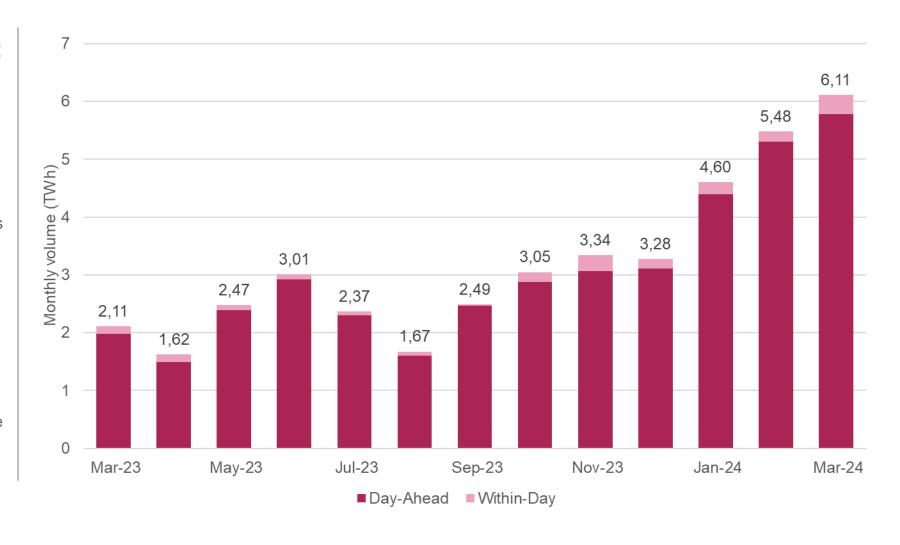
MARCH 2024

- In Norway some outages reduced flows to Europe with the start of the maintenance season. However, less works are expected this year than in 2023.
- Turkey started exporting gas to Hungary from April 1.
 According to the gas delivery contract between Hungary and Turkey, Turkey export 275 mcm gas to Hungary in 2024 Q2 and Q3.
- Some of the Trans Adriatic Pipeline (TAP) and the Interconnector Greece-Bulgaria (IGB) in the upcoming years.
- Slovenia is in talks with Algeria to extend the gas supply deal and increase the purchased volumes, after 2025.
- Sermany's regulator extends the German storage neutrality charge until 2027. The current fee is €1.86/MWh is valid until 30 June 2024.
- Slovak Gas TSO, Eustream plans significant transport tariff increases from January 2025 due to reduced transport through its system.

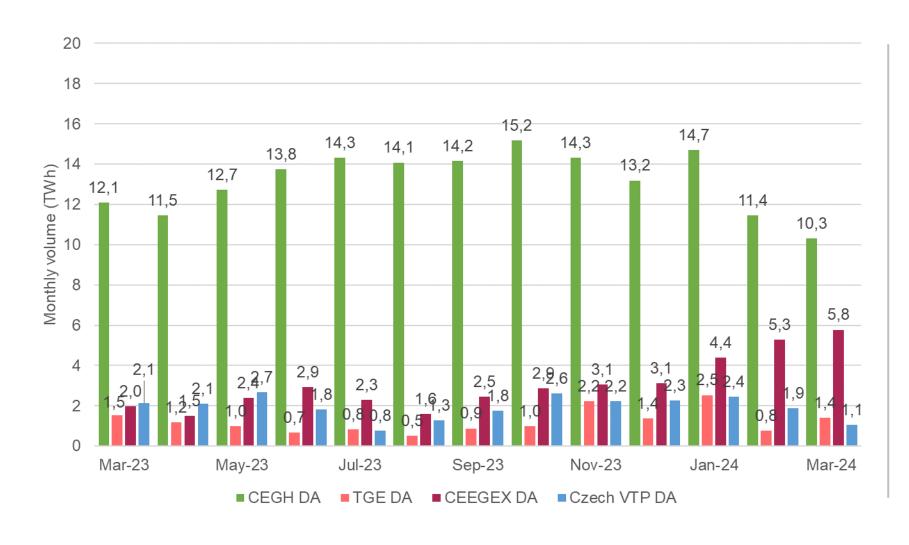
- When the stated on March 17, that it does not intend to extend the five-year agreement with Russia's Gazprom for the transit of Russian gas to Europe or to enter into a new one.
- >> FSRU arrived at Stade, Germany on Mach 15, which is able to inject up to 5 bcm of gas per year into the German gas network.
- >> TotalEnergies restarted gas production from Denmark's Tyra hub following a significant redevelopment that had kept it offline since 2019.
- Serbia and Russia will begin official negotiations on a new gas supply agreement on September 1st. The existing one will expire in 2025.

TRADED VOLUMES

- » CEEGEX volumes broke a new alltime record in March. March volumes increased by ~10% MoM and ~300% YoY
- Market participants might had bought the gas on the spot market on lower prices instead of using the gas stored previously on higher prices as withdrawal rates remained low in Q1 2024.
- Whigh gas flows towards Slovakia (and from there to Austria) are motivated by lower CEEGEX prices in comparison flows German prices including taxes.
- >>> CEEGEX volumes started to increase in line with higher flows from Bulgaria and Serbia last summer.
- The boost in trades might be associated to record high number of members, as well.

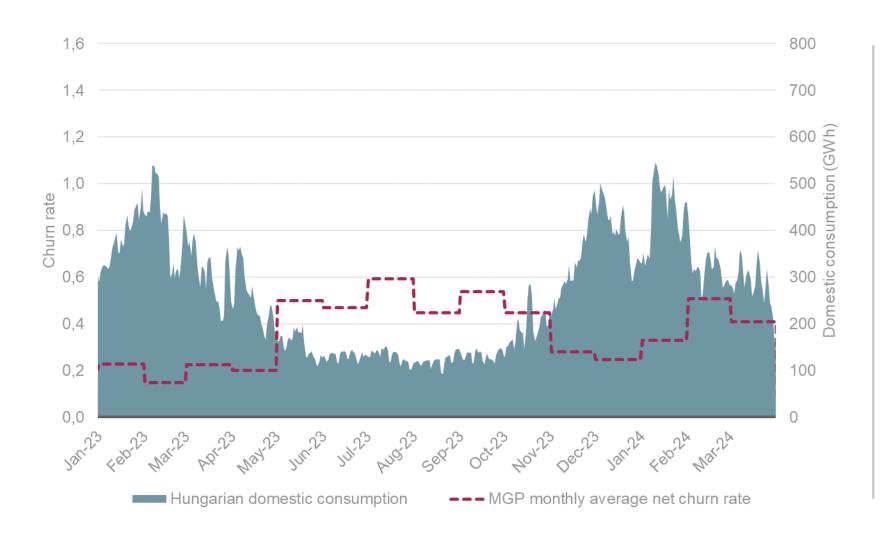


REGIONAL SCOPE DA MARKETS



- In 2024 the growth in CEEGEX traded volumes surpassed significantly the pace of growth on other regional benchmark exchanges.
- » Moreover, in March Czech and Austrian volumes further decreased MoM.
- » Lower CEGH volumes might be associated with lower MGP prices, thus lower Hungarian imports to Hungary from Austria and higher exports from Hungary to Slovakia.

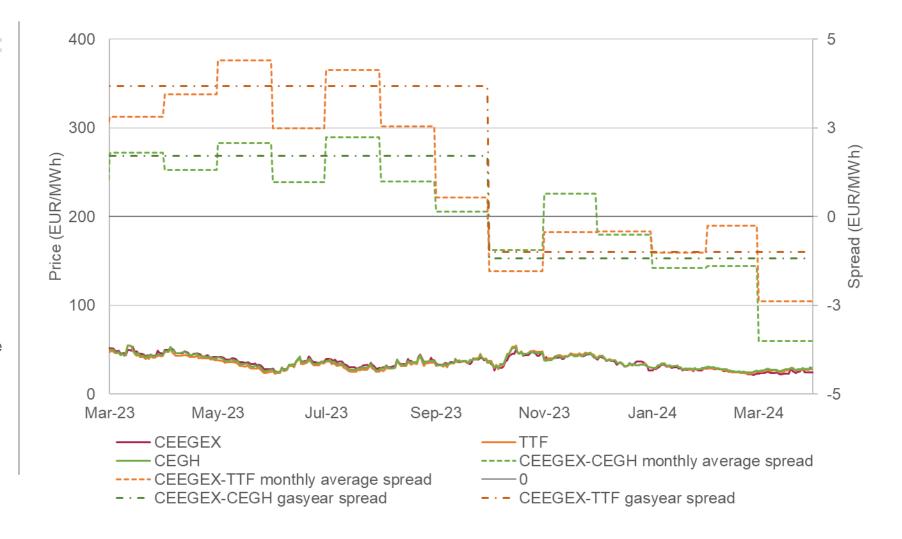
CHURN RATE



- » The churn rate is usually considered as the most important indicator of hub liquidity. It represents the ratio between the total volume of trades and the physical volume of gas consumed in the area served by the hub.
- The churn rate doubled year on year in the first quarter of 2024, while the domestic consumption remained similar to last year's
- » In the summer usually the churn rate is higher, while the consumption is lower

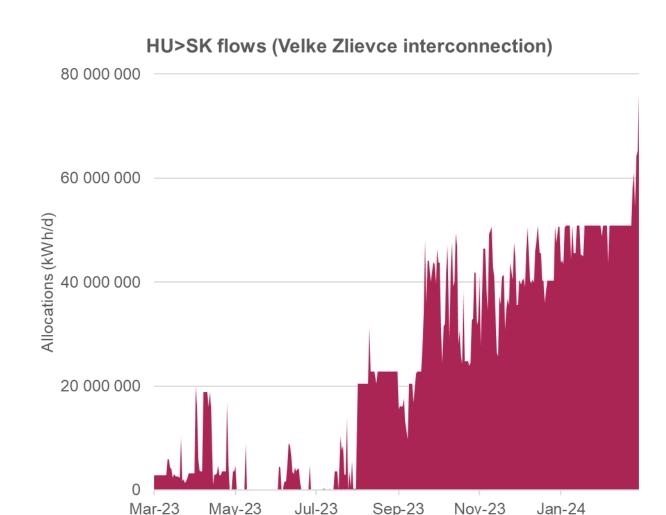
REGIONAL PRICES AND SPREADS

- In October 2023, the spreads flipped to the negative territory and this trend continued in Q1 2024.
- » In March, the spreads further widened in line with the change in traded volumes on CEEGEX and CEGH.
- >> Hungarian prices are in discount due to high storage sites, lower consumption, high and stable flows on TurkStream.
- The extension of the German storage neutrality charge and the expected cessation of flows via Ukraine from 2025 might had caused increasing flows via Hungary.

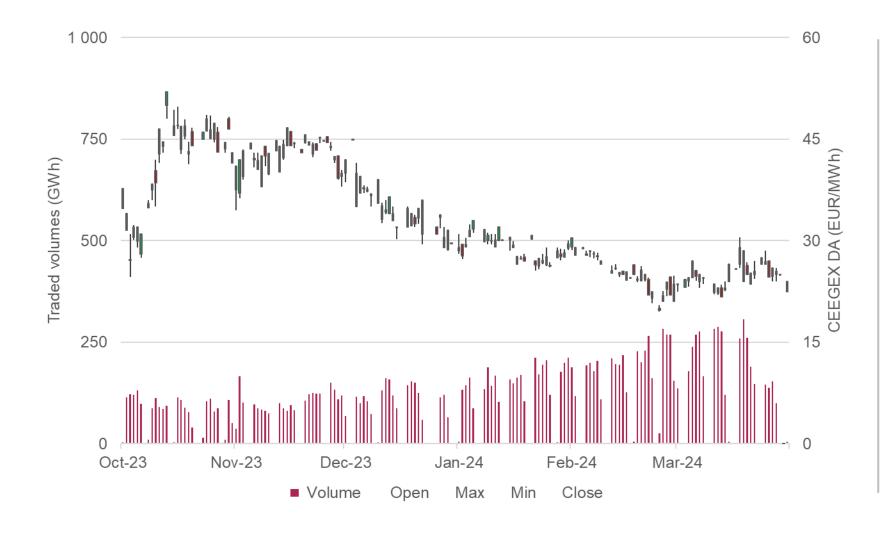


RECORD VOLUMES & SK, AT FLOWS

- >>> Recently, CEEGEX has seen multiple record trade volumes. This might be caused by **recent regional trends**, such as below:
- In Feb-March '24, the Slovakian VTP started trading at a discount to the Austrian VTP.
- >>> This negative spread might be related to outstanding SK storage levels (almost 75%, in contrast to aggregate European levels of ~50%).
- According to experts, Slovak shippers are often varying to carry these stored volumes to next winter, which motivates them to sell it at some discount to regional markets like Austria.
- >> At the same time, **HU>SK flows are also very high**, with sometimes nearly all capacities being booked on capacity auctions.
- The Hungarian MGP has been trading at a discount to Austrian VTP for quite some time, and is still at a discount to the Slovakian VTP as well.
- These facts suggest that most Slovak shippers might pursue a strategy to realize a profit on the short term – simultaneously acting as a transit country for volumes coming from Hungary, and offloading their excess storages.
- On the other hand, Austrian buyers are motivated by unfavorable German taxation to import from other sources instead, but since there is no sufficient infrastructure for direct HU>AU export, other routes like that via Slovakia must be used for transit.
- Experts expect these price trends to persist as Hungary will start to receive Turkish volumes in 2024 Q2, thereby sustaining the supply dynamics that seem to have caused these trends.

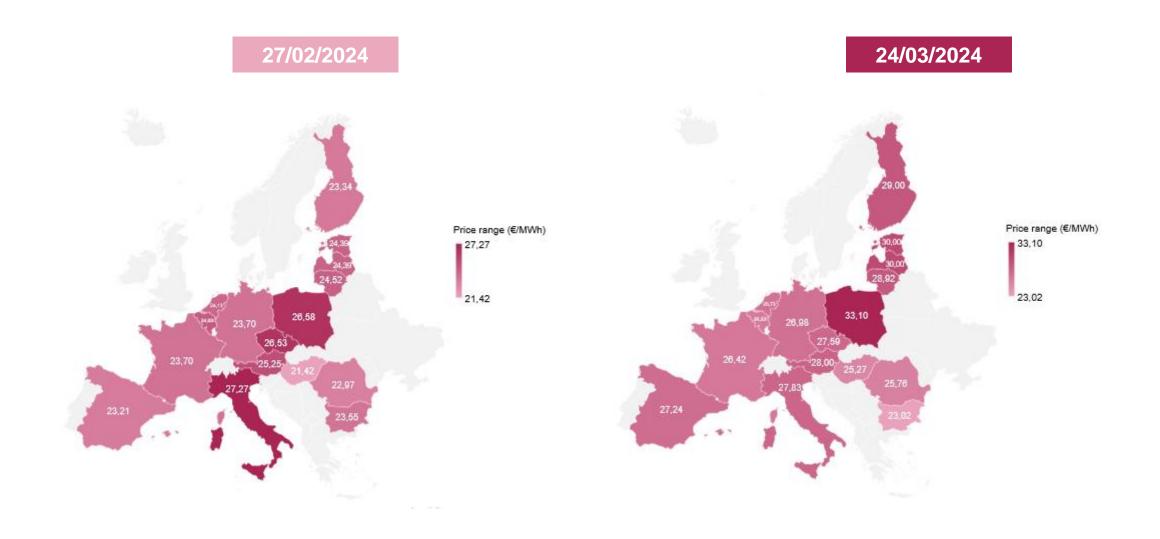


JAPANESE CANDLES LAST 6 MONTHS



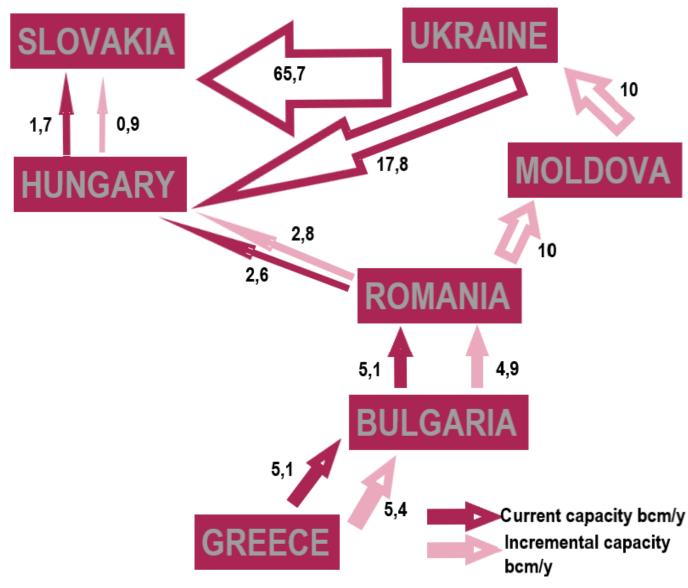
- >> In March, prices bounced back to early Ferbuary levels.
- Price jumps were caused by Norwegian maintenances and a drop in LNG imports to Europe.
- In March volatility also heightened: price swings were the widest so far this year.
- Although price levels are similar to 2021, volatility remained significantly higher than before the energy crisis.
- This is mostly due to the change in the structure of gas sources: Europe is now highly dependent on LNG supplies, thus exposed to global market events.

NATURAL GAS PRICES SNAPSHOT



VERTICAL CORRIDOR

- >> Hungary, Romania, Bulgaria and Greece launched the Vertical Corridor initiative in September 2016
- Aim: to secure and expand bidirectional gas transport between countries through infrastructure development
- December 2022: member states confirm their intentions, the importance of the route has increased due to the Russian-Ukrainian war
- January 2024: Slovakia, Ukraine, Moldova join the initiative, may seek alternatives due to the planned end of Russian gas transit to Ukraine
- Pipeline potential: Romania aims to extract ca. 100 bcm of natural gas with Neptun Deep offshore gas project from the Black Sea
- » LNG potential: LNG terminal in Alexandroupolis started operations in March 2024 with a capacity of 5.5 bcm/year, 4 more LNG terminals planned to be operational in Greece by 2026



OIES: IMPACT OF RED SEA CRISIS ON THE LNG MARKET

» Red Sea and Panama Canal disruptions:

- Since January 12, 2024, no LNG cargoes have crossed the Red Sea due to attacks by Houthi forces on vessels.
- A historic drought in Panama has resulted in reduced water levels at the Panama Canal. Although draught restrictions at the Panama Canal still permitted LNG carriers to transit, they resulted in longer wait times.
- In 2023 10% of the global LNG was shipped via these two routes
- So instead of crossing the Red Sea, ships take the longer route via the Cape of Good Hope.
- Due to longer distances the shipping costs increased and the effective capacity of the shipping fleet reduced, because the vessels spend more time in transit
- » US LNG exports to Europe increased while US LNG imports to Asia dropped
- » Qatar LNG exports to Europe remained steady in January but decreased in February because of diversion of cargos to Asia.

» Market response:

- Benchmark LNG prices didn't experience a spike in Europe or Asia, but they remained high enough to absorb the additional shipping costs.
- Benchmark gas prices have not shown a significant reaction to Red Sea disruption. TTF prices have been stable or fallen, because of other bearish demand-side factors: mild weather in Europe and high storage levels.
- The key conclusion: despite two of the world's largest LNG exporters facing extra costs and time, called an 'inter-basin shipping premium', to reach their secondary markets (United States to Asia and Qatar to Europe), the global LNG market has adapted to this change and will continue to do so.
- » If the Red Sea crisis will persist, the overall impact would be a tighter LNG market

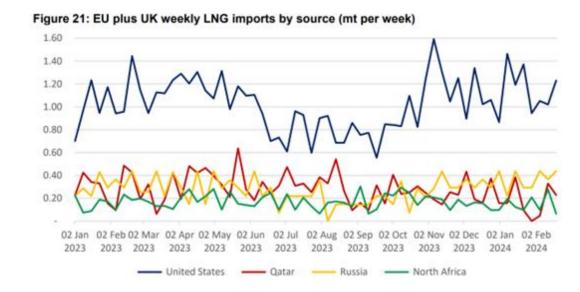


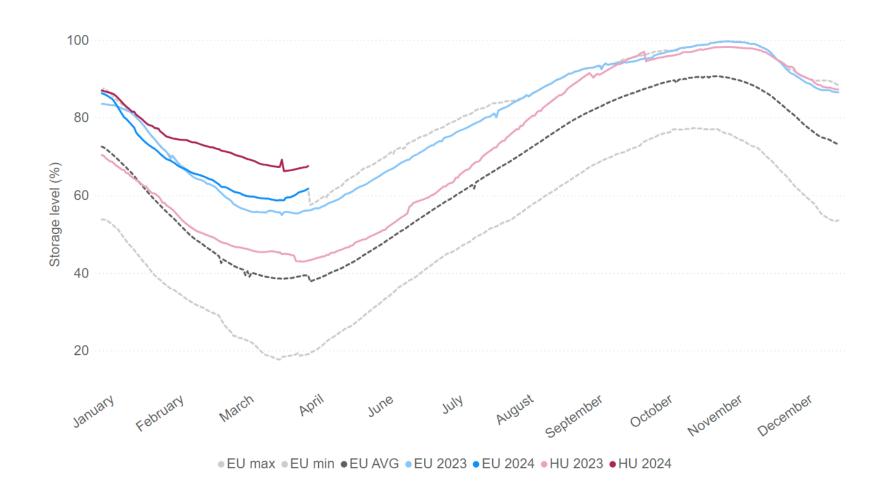
Figure 19: Argus price assessments for LNG delivered to NE Asia & NW Europe (USD/MMBtu)



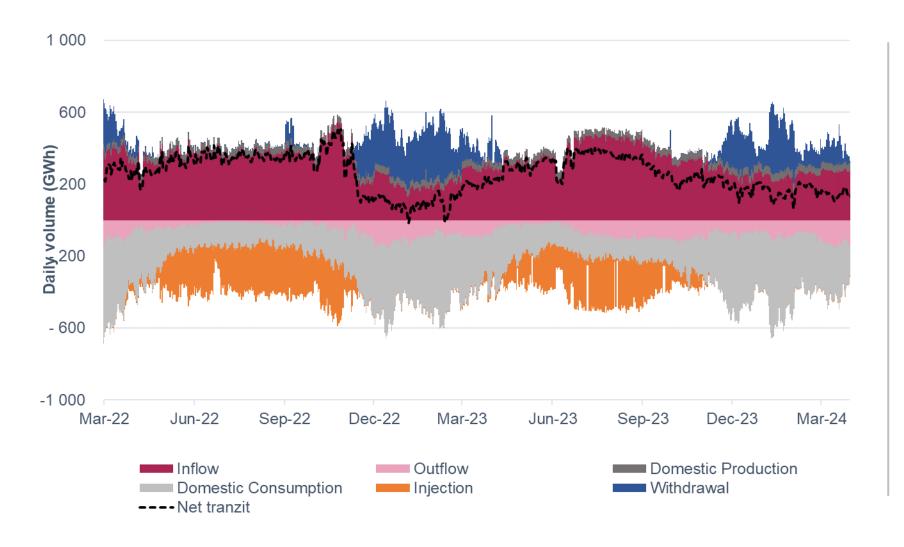
Source of the charts: The Oxford Institute for Energy Studies

GAS STORAGE LEVEL IN EU AND HU

- » EU aggregated storage sites were at 58% by the end of March, while Hungarian stocks at 69%.
- Both values are above the 10 year maximum values and 2023 values.
- The pace of withdrawals is slower than last year due to lower demand and favourable spot prices.
- >>> Hungarian storage levels remained above the required minimum level by the end of the heating season.



HUNGARIAN GAS MARKET BALANCE

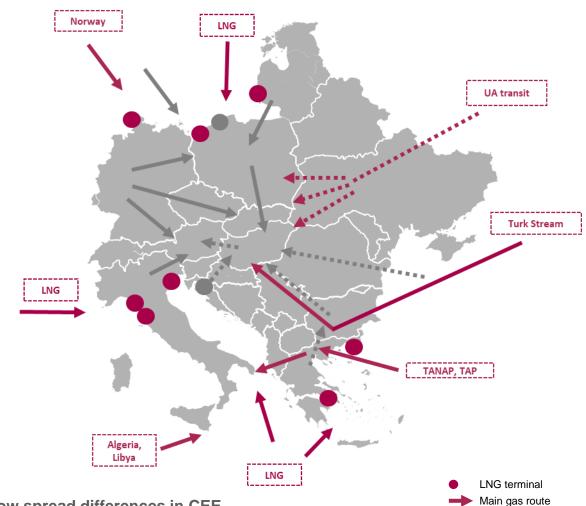


- Withdrawals and domestic consumption peaked only in January due to mild weather and lower demand. In February and March the pace of withdrawals remained moderated.
- Domestic production remained unchanged, but the decreasing trend had stopped at least.
- » In March import volumes grew by 20% MoM despite the significant drop in Austrian imports. Serbian imports remained high and Croatian imports also grew.
- Export volumes almost doubled in March. Export towards Slovakia and Ukraine surged and Romanian exports also appeared.

GERMAN NEUTRALITY CHARGE & UKRAINIAN TRANSIT

EXPERT OPINION:

- Serman export fee (storage neutrality charge): introduced in 2022, its value increased every 6 months, currently at 1,86 EUR/MWh and extended until 2027. It might make flows from NW to SE more expensive. ACER is investigating the tax as Italy also is considering the introduction of a similar tax, while Austria and Slovakia are planning to increase TSO tariff rates from 2025 due to lower transit volumes. Austrian, Czech and Polish markets are already at a premium to German gas prices. This is boosting flows from Hungary via Slovakia to Austria.
- >> Currently remaining flows via Ukraine: around the same amount as volumes via TurkStream (close to max capacity) and same amount as Russian LNG volumes arriving to Europe. EU wants to phase-out Russian gas until 2027, Austria is trying to end its long-term gas contract with Gazprom, while Hungary is not planning to cancel gas supplies from Russia.
- >> Alternative supply routes apart from TurkStream: BRUA, Baltic Pipe, GIPL, Krk, from Germany, from Italy, TANAP TAP
- According to the EC's point of view, Ukrainian transit can be replaced by LNG and pipeline gas via Italy, Austria, Hungary, the Czech Republic and Slovakia, but many of these countries are landlocked.
- Several infrastructure developments in the SE, CEE and Balkan region are expected to come online after 2027: BG-RS-HU pipeline (2028), GR-MK interconnector (2025), IGB expansion (2025), TAP, TANAP expansion (2026), Krk expansion & HU-HR expansion (2026), Neptun Deep (2027) & RO-HU expansion, HU-SI interconnector, Gdansk FSRU (2028), Vertical Corridor, Solidarity Ring,



>> Possible scenarios until 2027:

- High demand (e.g. cold spell): flows to CEE via TrukStream and NW-Europe low spread differences in CEE
- Balanced demand: flows to CEE mostly via TrukStream CEE & CX discount in comparison to NW markets
- >> After 2027: well supplied CEE markets: increased flows from SE and Black Sea via HU & further extension of the NW taxes CX discount

Expiring gas route

Alternative gas route

Planned/Expansion