



Global & Regional Market Analysis

NATURAL GAS, January 2023

15/02/2023

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STORIES OF THE MONTH

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JANUARY 2023

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- » ACER published the first LNG assessment price for NW Europe on 13 Jan at 56.77 EUR/MWh. ACER only considers spot ex-ship transactions and requires at least 5 eligible transactions over a window of 5 working days.
- » On 31 Jan EU selected gas capacity platform PRISMA to calculate member state's collective demand for gas in order to launch joint gas buying tender.
- » On 26 Jan US regulators approved Freeport LNG's request to partially restart operations before returning to full production and export.
 - » Germany's next FSRU at Lubmin injected its first gas into the country's gas network on Jan 9.
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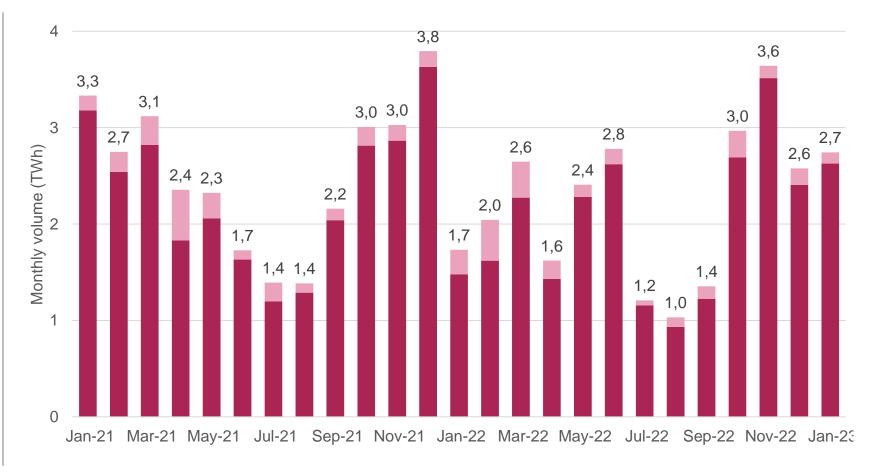
- » On 20 Jan the Hungarian government announced that gas contracts indexed to TTF, VTP or CEEGEX can be switched to have fix prices for the rest of the gas year based on the ICE Endex forward curve.
- » The world's most draconian COVID-19 containment policy was reversed on 4 Jan in China. After the unlocking the virus had spread like wildfire.

- European imports of Russian LNG were close to record high levels in Jan. More than a third of Russian LNG shipments to Europe went to Belgium, France and Spain in Jan.
 - Russian gas pipeline flows to Europe dropped to record lows in Jan (1.5bcm). Volumes via TurkStream and Ukraine dropped 36% in comparison to deliveries in Dec.
- » A gas pipeline connecting Lithuania and Latvia was hit by an explosion on 13 Jan, but there was no immediate evidence of an attack. The explosion has not stopped exports to Latvia.
- Wkraine started a new certification process allowing to store strategic EU gas stocks (not only gas of private foreign companies) in its underutilized 31bcm underground storage sites.
- The Spanish government requested authorisation from the EC to extend the so-called "Iberian derogation" until the end of 2024. It was introduced in Jun 2022 to limit the gas price for electricity generation in Spain and Portugal.

TRADED VOLUMES

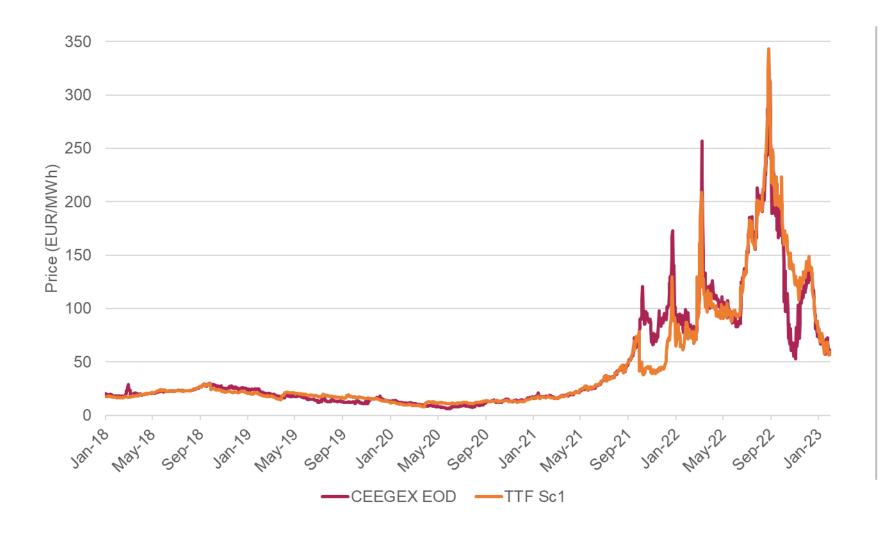
EXPERT OPINION:

- » CEEGEX traded volumes increased MoM and YoY.
- In January the TTF FM-spot spread returned to the negative territory incentivizing spot trades as opposed to allocating additional volumes under long-term contracts.
- >> On the other hand, storage withdrawals speeded up in January despite relatively mild weather.



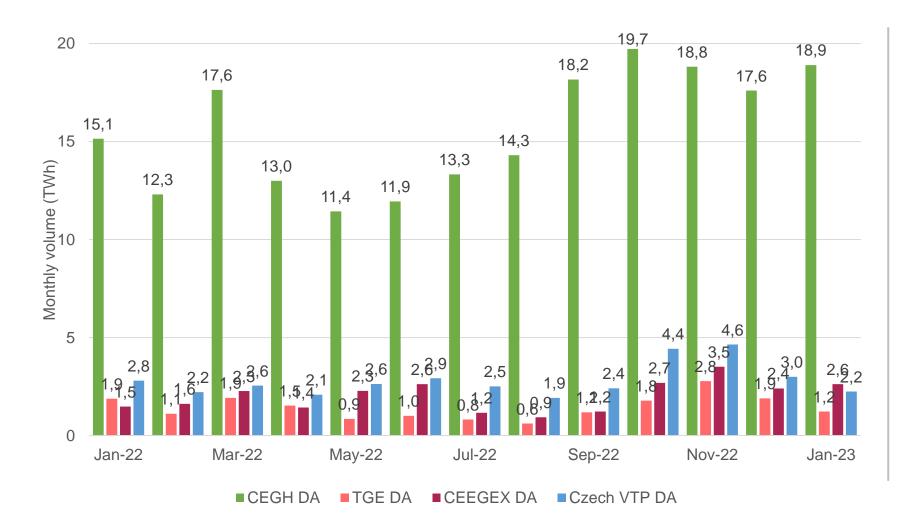
Day-Ahead Within-Day

SPOT-FORWARD SPREAD



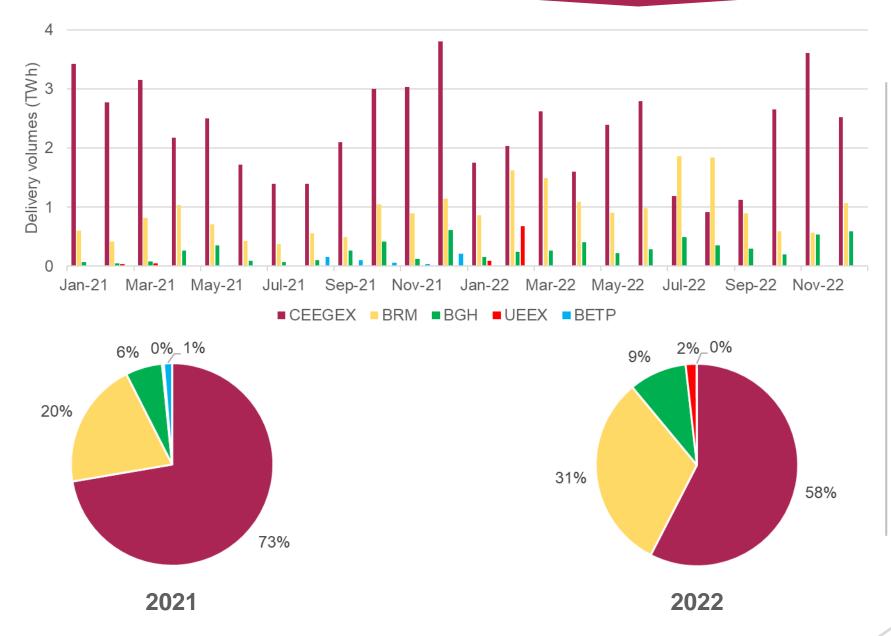
- In October and November 2022 the spot-forward spread widened significantly. The reasons for low spot prices are mild weather, high storage levels and LNG supply.
- The risks related to the war in Ukraine and the uncertainty of the future are only detectable in the forward market.
- In the past high spot-forward spreads were rare, occurring only occasionally, mostly due to weather conditions.
- During Beast from the East in 2018, spot prices were 70% higher, and during the warm autumn of 2019, they were 30% lower than futures prices.

REGIONAL SCOPE DA MARKETS



- Similar increase in volumes is observable CEGH DA, while Czech VTP and TGE DA volumes decreased.
- AT>IT flows have ramped up in Jan after a drop in Dec and Oct.

EMERGING GAS HUBS & CX SPOT VOLUMES BY DELIVERY DAYS

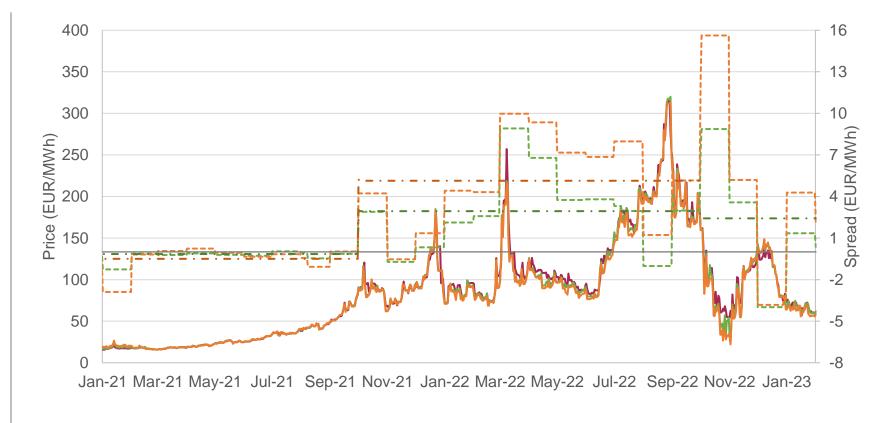


- BETP was launched in May 2021. After a good start with increasing volumes, trading has completely stopped since last February.
- BGH spot market showed a slow, but steady increase in volume last year compared to 2021.
- After record high delivery volumes in February 2022, trading on the UEEX spot market is insignificant.
- BRM produced record volumes during summer 2022, but fell sharply in the last quarter. Their annual volume increased by 5 TWh compared to the previous year.

REGIONAL PRICES AND SPREADS

EXPERT OPINION:

The CX-CEGH spread was positive, still high enough to make AT>HU imports profitable (most probably due to high annual capacity cost at HAG), therefore flows from Austria remained below November values.

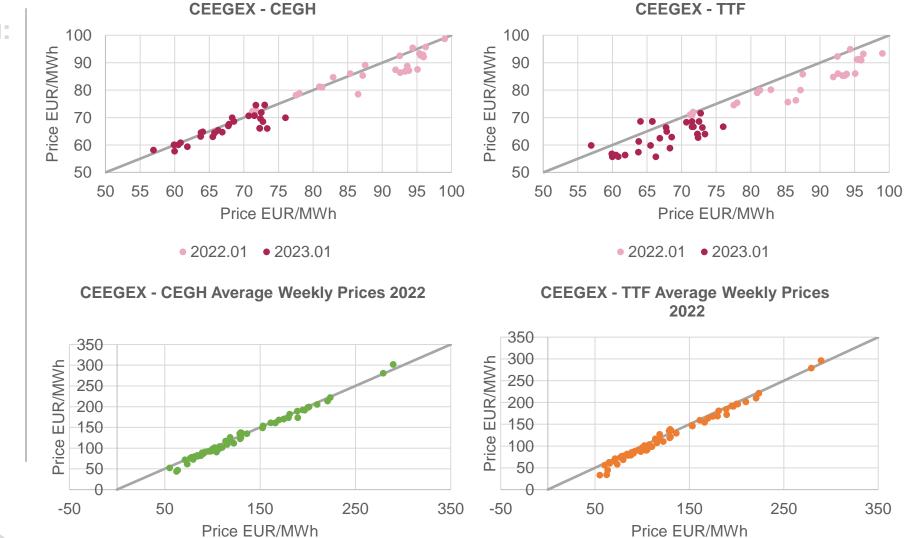


- CEEGEX
 CEEGEX
 TTF
 CEEGEX-TTF monthly average spread
 ---- CEEGEX-CEGH gasyear spread
 ---- CEEGEX-TTF
 - ----- CEGH ----- CEEGEX-CEGH monthly average spread ---- 0 --- CEEGEX-TTF gasyear spread

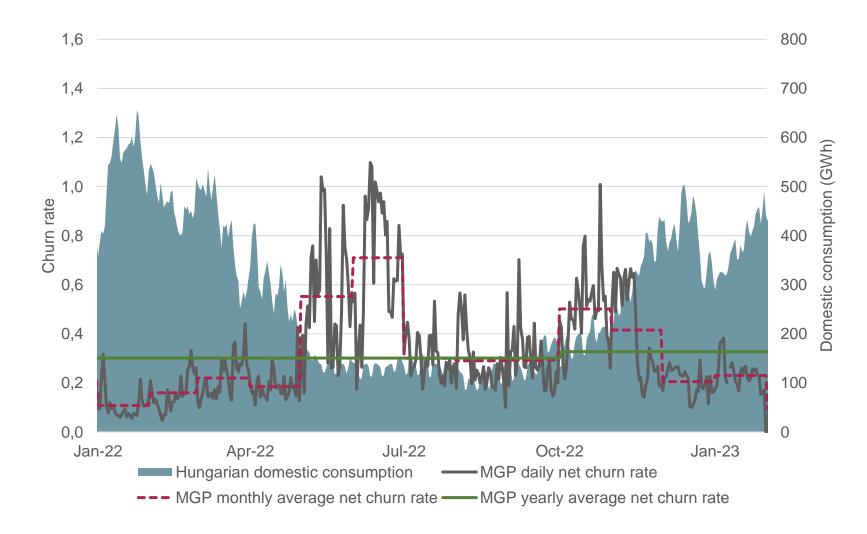
CEEGEX-CEGH, CEEGEX-TTF CORRELATION

EXPERT OPINION:

- Last year, the daily CEEGEX CEGH and CEEGEX - TTF correlations were above 0.98. In 2023 January both CEEGEX - CEGH and CEEGEX - TTF correlations dropped and the spread between the prices widened
- In January, the CEEGEX CEGH correlation was stronger than the CEEGEX TTF correlation.
- CEEGEX and CEGH prices were roughly the same in January, but TTF prices were a few euros below them in the whole month.

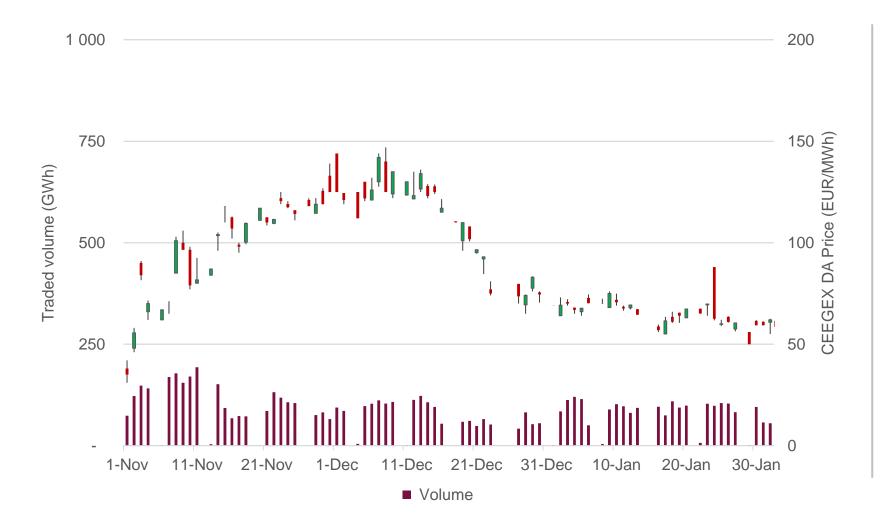


CEEGEX CHURN RATE



- >> CEEGEX yearly average churn rate is above the last gas year average.
- The monthly churn rate increased compared to January 2022.
- The domestic consumption is lower compared to the last years level. The consumers are trying to save more energy than in the last year due to the higher energy prices.
- >> CEEGEX monthly volume significantly increased in January 2023.

JAPANESE CANDLES



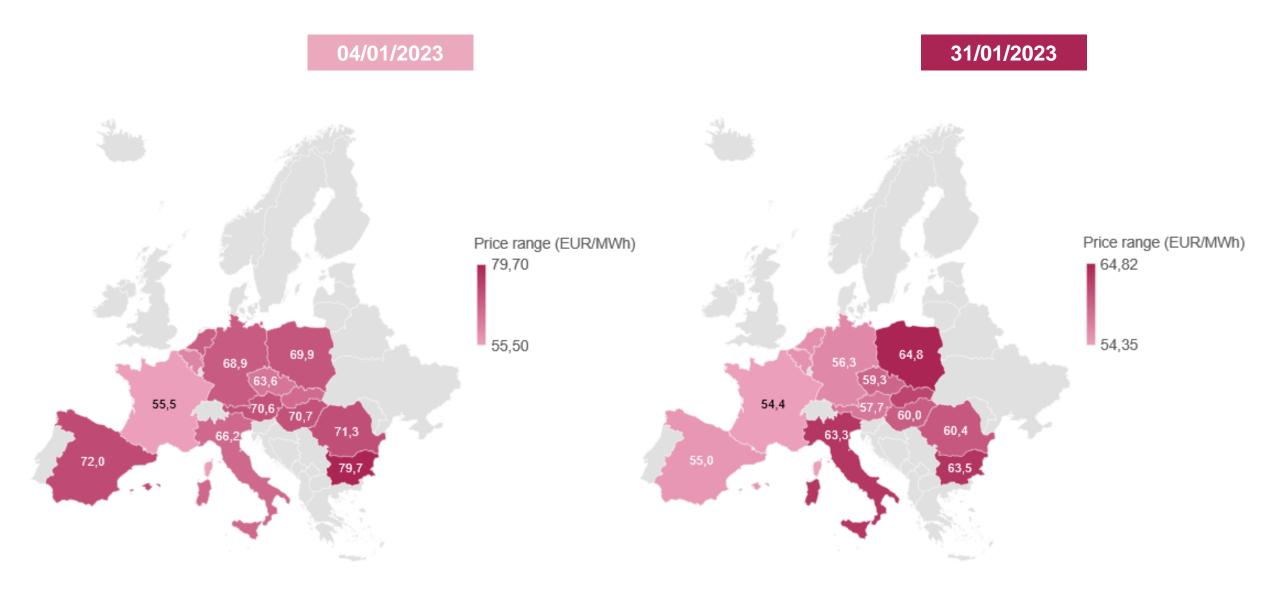
- >> Volatility moderated in comparison to Nov-Dec.
- In January prices were pressured by mild weather & low demand, high LNG & strong wind output.
- » No significant news relating to pipeline supply drops or regulatory changes.
- Some spikes in relation to cold weather forecasts.
- One spike on 24 Jan due to a single high trade (15 EUR/MWh above the AVG daily price) at the opening, but further trades were in line with price levels of the previous days.

BEARISH PRICE DRIVERS IN JANUARY

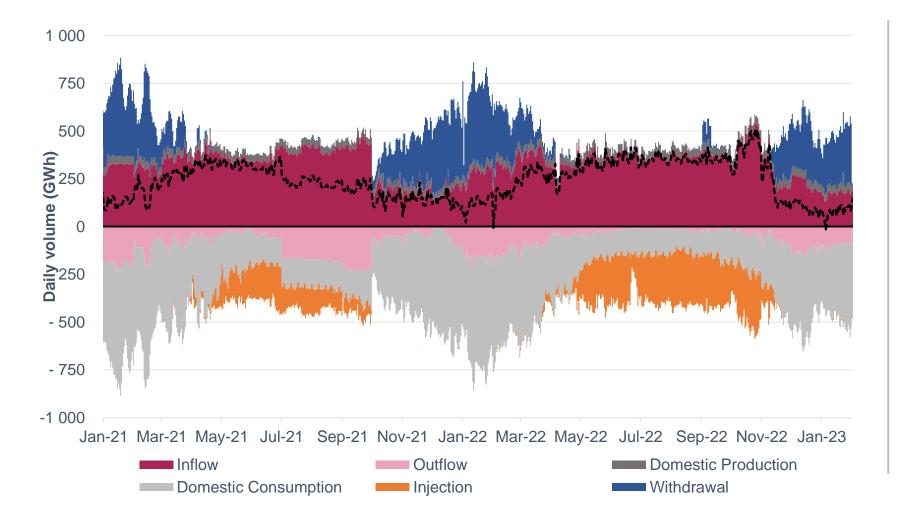


- » ~250 EUR/MWh drop in 6 months
- Similar movements of TTF DA and CEGH DA.
- **>>** Bearish factors:
 - mild weather resulting in 20% lower EU demand
 - **storage** levels 30% above 5year average
 - ample LNG influx to Europe and YoY 20% lower LNG imports to China (COVID, lower economic output)
 - no Russian reaction on the EU
 price cap
 - wind generation YoY 30% higher in January

NATURAL GAS PRICES SNAPSHOT



HUNGARIAN GAS MARKET BALANCE

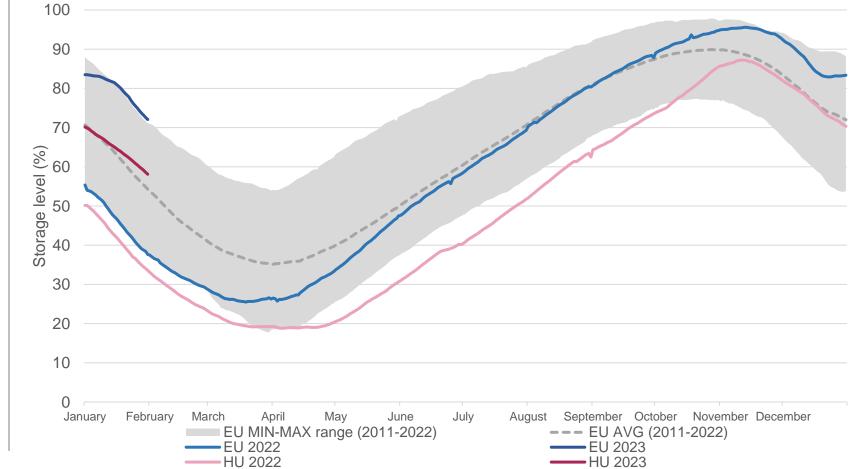


- Domestic consumption increased to similar levels that were during the first half of Dec. (In the second half of Dec demand dropped due to mild weather). Still, it was 30% below 2022 January values.
- Parallel, withdrawals also increased in line with demand.
- >> On overall imports decreased, mostly due to lower volumes from AT and RS.
- \gg Exports to SK increased.

GAS STORAGE LEVEL IN EU AND HU

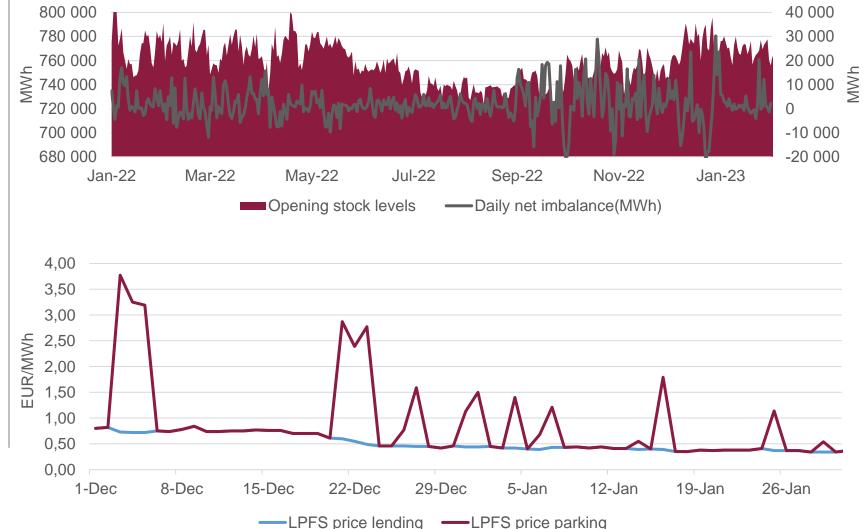
EXPERT OPINION:

- European aggregated storage levels were at 83% at the start of the year and withdrawals started to speed up only in the second half of the month.
- In contrary, in Hungary the pace of withdrawals was high since November. Still, current Hungarian storage levels were above the EU's 12year average in January.
- According to a former EC decision in November, EU gas storage must had been at least 45% full on average on 1 Feb 2023. Aggregated EU storage levels were at 72% on the last day of January.



FGSZ DAILY IMBALANCES

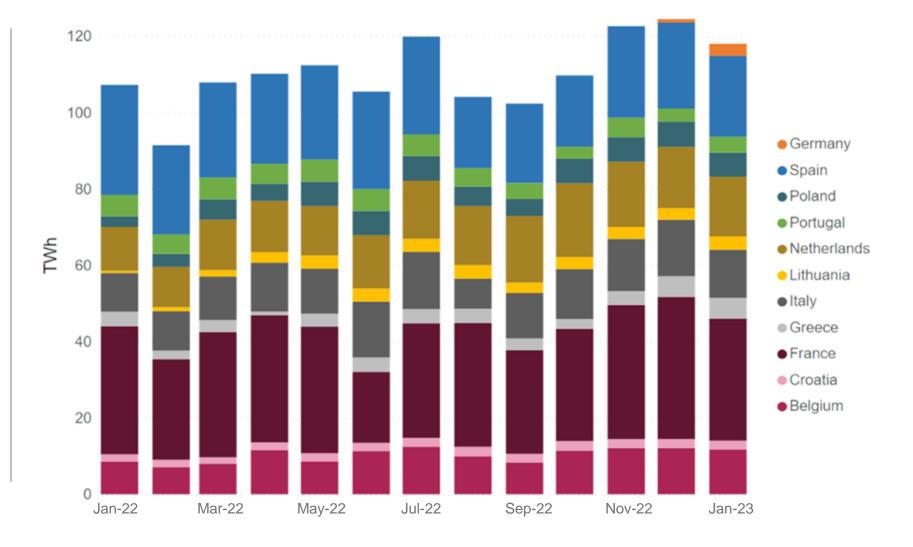
- FGSZ launched it's linepack flexibility service (LPFS). The service can be activated for the shippers in the RBP platform, by specifying a rate different from zero of the requested LPFS and respective gas day.
- The lending and parking prices are the 20% of the difference between the daily average gas price published in HUF/MWh and the marginal selling/purchasing price valid for the gas day (D gas day) in case of the Network User's positive/negative imbalance settled within the framework of flexibility service
- The daily imbalance levels was quite stable throughout 2022, however in October it became volatile. The launching of the service was not able to straighten it out, only made it cheaper to be in imbalance on a daily level.



LNG SEND-OUTS BY EUROPEAN COUNTRIES*

EXPERT OPINION:

- Italy and France have reduced their demand for LNG supplies in January.
- In Germany, LNG have entered the network in the last two months.
- Although the European weather was milder in January, LNG demand did not decrease significantly.
- French nuclear power production rose at the end of December.



* Excluding UK

GAS PRICE CAP AND REFERENCE LNG PRICE

EU regulatory body ACER on 13 January strated pulishing daily **LNG price assessments** for Northwest Europe (DES NWE) and Southern Europe (DES SE) based on data submitted by LNG market participants.

ACER on 1 February published its first daily **LNG reference price** (MCM RP) as part of the EU's new gas market correction mechanism (MCM).

- » ACER has set the first daily reference LNG price to be considered in automatically triggering an EU gas price cap at 55.21 EUR/MWh.
- » ACER must publish this reference price on its website every weekday by 23:59 CET.
- The reference price is calculated by averaging several indices and price makers related to LNG. These include LNG prices form Europe and Asia and ACER's newly launched LNG spot price assessment, as well as the NBP front-month settlement price.

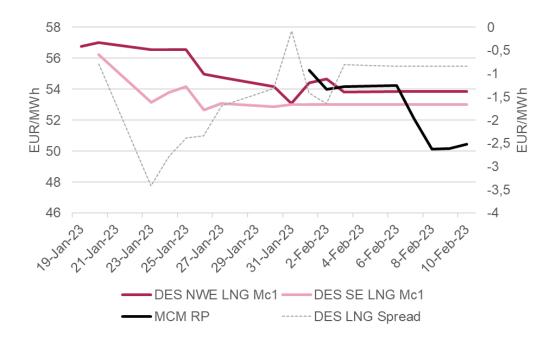
The MCM came into effect on 15 February after having been agreed by EU energy ministers in December.

- The price cap requires the TTF ICE settlement price to exceed 180 EUR/MWh for three consecutive working days and for the spread between the TTF and the ACER reference price to exceed 35 EUR/MWh for those same days.
- If triggered, exchange trading on the TTF hub would be limited to 35 EUR/MWh above reference price for at least 20 days, or at 180 EUR/MWh if prices were to fall back below the threshold.
- >> The market correction mechanism can be immediately suspended if it harms supply, flows or financial stability.

Gas prices have declined substantially since record highs in the summer of 2022:

- ICIS assessments on 1 February showed the TTF front month had fallen 82% from its peak on 26 August 2022.
- The contract has been below the 180 EUR/MWh threshold since October.

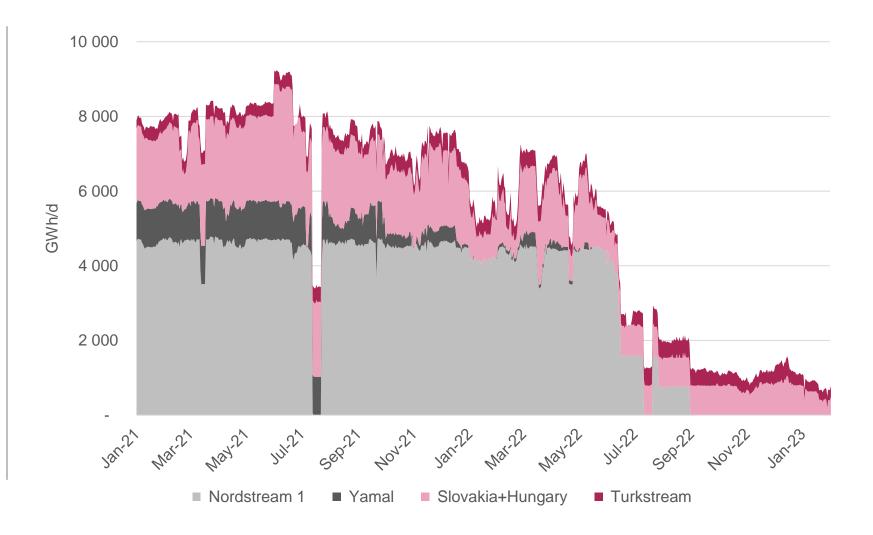
The ICE exchange is setting up a parallel option for trading Dutch TTF futures in London as an alternative for participants who still wish to trade after the EU cap on its Dutch ICE Endex platform is activated.



GASFLOWS FROM RUSSIA

EXPERT OPINION:

- Flows from via the UA route further decreased in January reaching record low values.
- Deliveries via TurkStream also lowered in comparison to 2022 Q4.
- In December 2022 Russia said it was prepared to resume flows through the currently disused Yamal pipeline, but no changes are visible here since last summer.



REGULATORY UPDATES: EU GAS CRISIS PACKAGE

On 19 Dec EU ministers have adopted emergency rules for one year (COUNCIL REGULATION (EU) 2022/2576 & 2022/2578):

» Market Correction Mechanism (MCM) "gas price cap"

- Activated if the TTF FM price is above 180 EUR/MWh for 3 trading days & the spread to the LNG benchmark exceeds 35 EUR/MWh
- M+1, M+3 and Y+1 contracts will not be allowed to be traded
- prices can go above 180 EUR/MWh if the LNG benchmark is above 145 EUR/MWh
- automatically deactivated after 20 days or if the LNG benchmark + 35 EUR/MWh returns below 180 EUR/MWh or if EC declares an emergency; suspended
 if gas consumption increases, TTF gas trades or LNG imports decrease, negatively affecting security of supply, intra-EU flows or financial stability
- apply from 15 Feb, extended to other VTPs after 31 March
- ESMA & ACER report by 31 March (preliminary report: no significant impact yet but in the future it is likely that market participants would shift to trading gas on contracts or venues where the cap doesn't apply either by moving to non-EU trading platforms or trading OTC).

» Publication of LNG price assessments & benchmark

- Two separate daily LNG price assessments for NWE and SE published since 13 Jan (only spot ex-ship transactions & min. 5 eligible transactions over a window of 5 working days). All companies involved in buying or selling LNG cargoes delivered or intended to be delivered to the EU to submit their daily LNG market data to ACER via a dedicated platform.
- One daily **MCM reference price** (LNG benchmark) published since 1 Feb (based on several indexes and market prices related to LNG price trends e.g. Platts, Argus + above daily LNG price assessment)

» Coordinated demand aggregation & joint gas buying

- EU has appointed gas capacity platform **PRISMA as service provider**. PRISMA will be responsible for grouping together countries' gas import needs and seeking offers from gas suppliers to match those volumes (min. 15 % of the total volume necessary to meet the filling targets)
- Tendered gas volumes above 5 TWh/y have to be reported to EC 6 weeks before, companies can form consortia
- · Russian companies, volumes, cross border capacities are excluded

» Temporary intra-day "circuit breakers" to manage excess volatility in energy derivatives markets

• The mechanism was introduced on HUDEX GFF and EFF segment

» Measures to enhance the use of LNG facilities, gas storage facilities and pipelines

• Secondary capacity booking to re-sell unused capacities, TSOs to offer underutilized capacities, transparency platforms by 28 Feb

» Solidarity measures

• Extension of gas solidarity for electricity supply, essential industries and protected customers, rules of cross-border solidarity