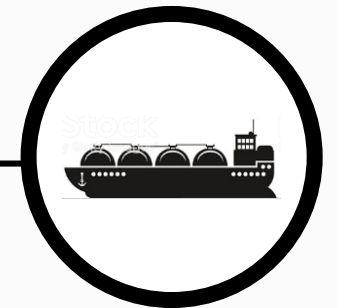


Annual Global & Regional Market Analysis

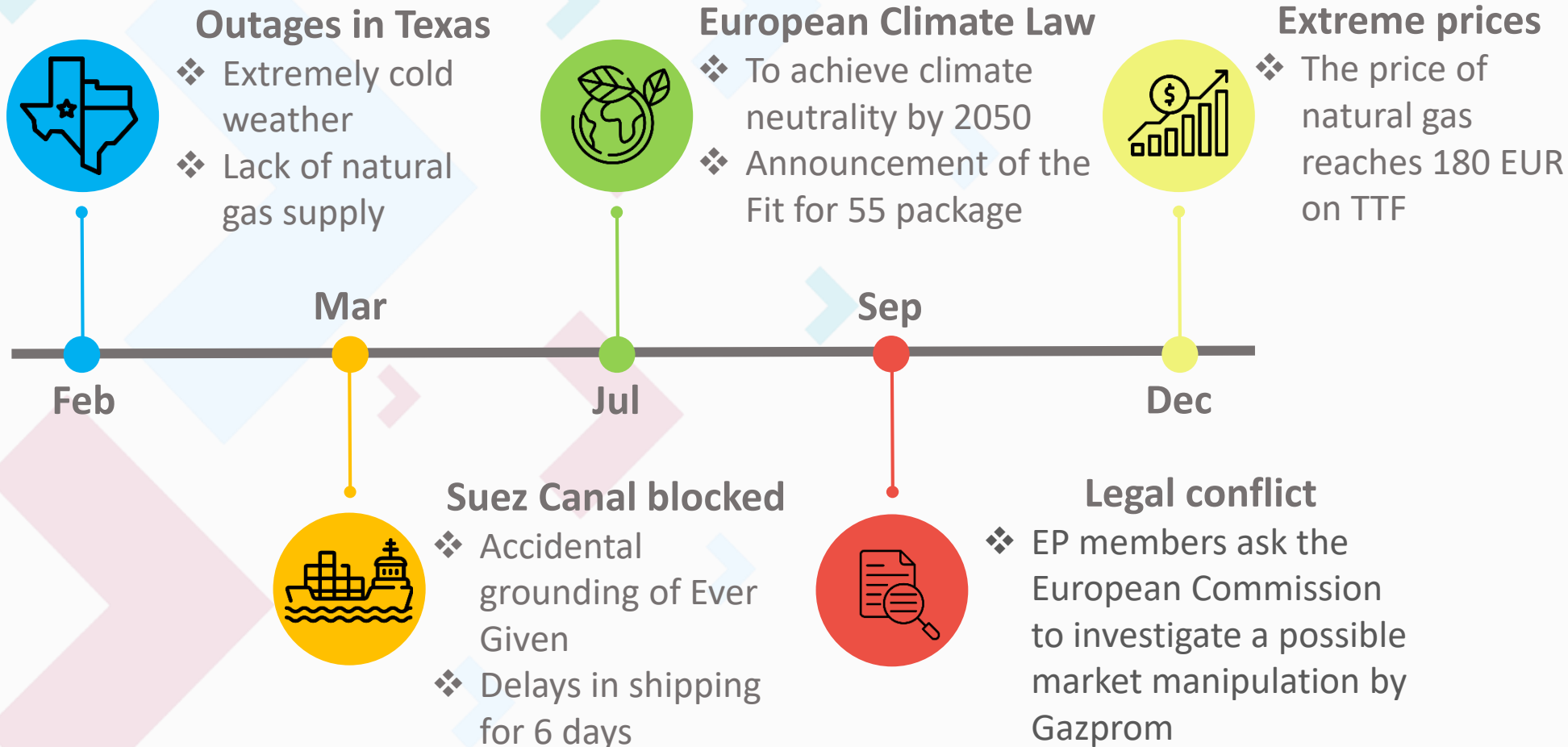
Natural Gas

2021



The main events of 2021

One-time events of major importance



2021 for CEEGEX and HUDEX

CEEGEX:

- ❖ **Apr:** All-time WD traded volume record (0,52 TWh)
- ❖ **Q1 & Q4:** All-time traded volume record (>9 TWh)

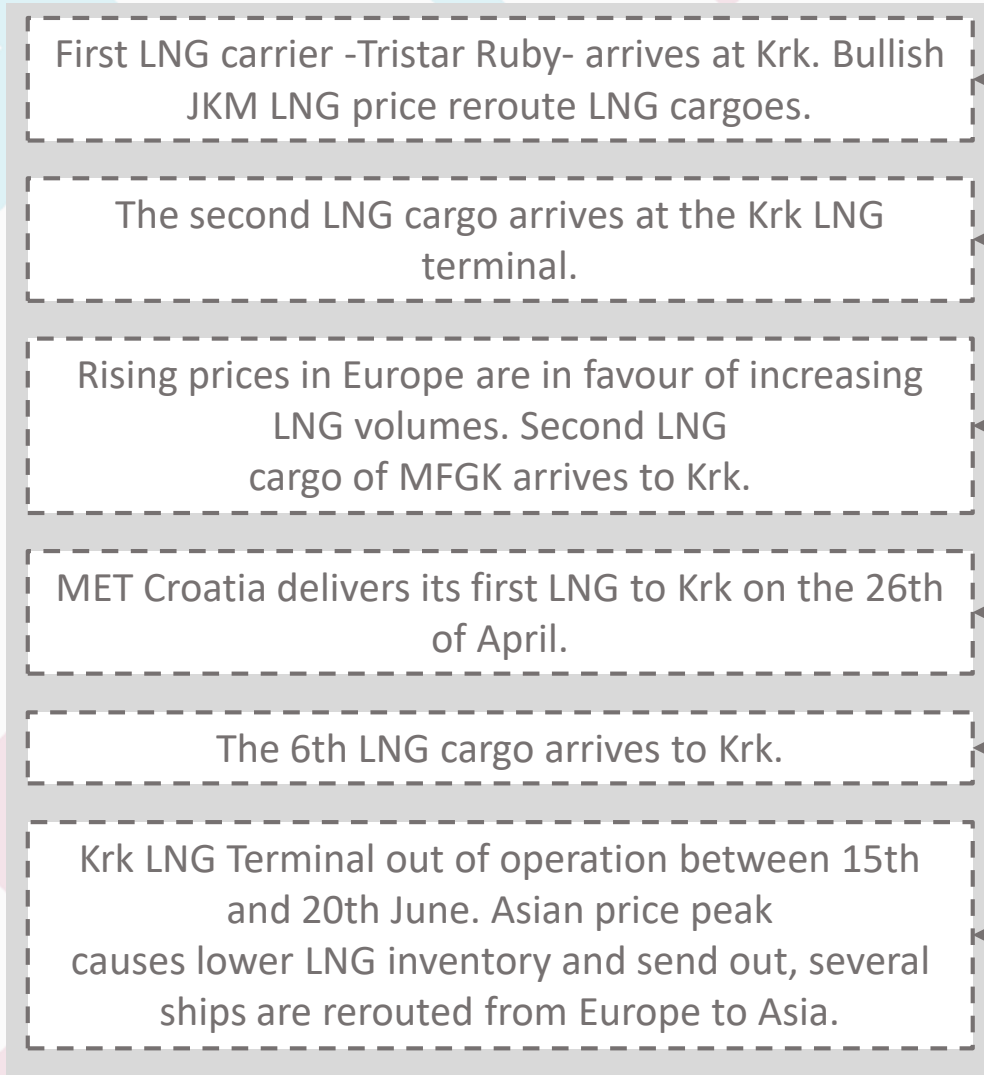
HUDEX:

- ❖ Total traded volume record (1,13 TWh)

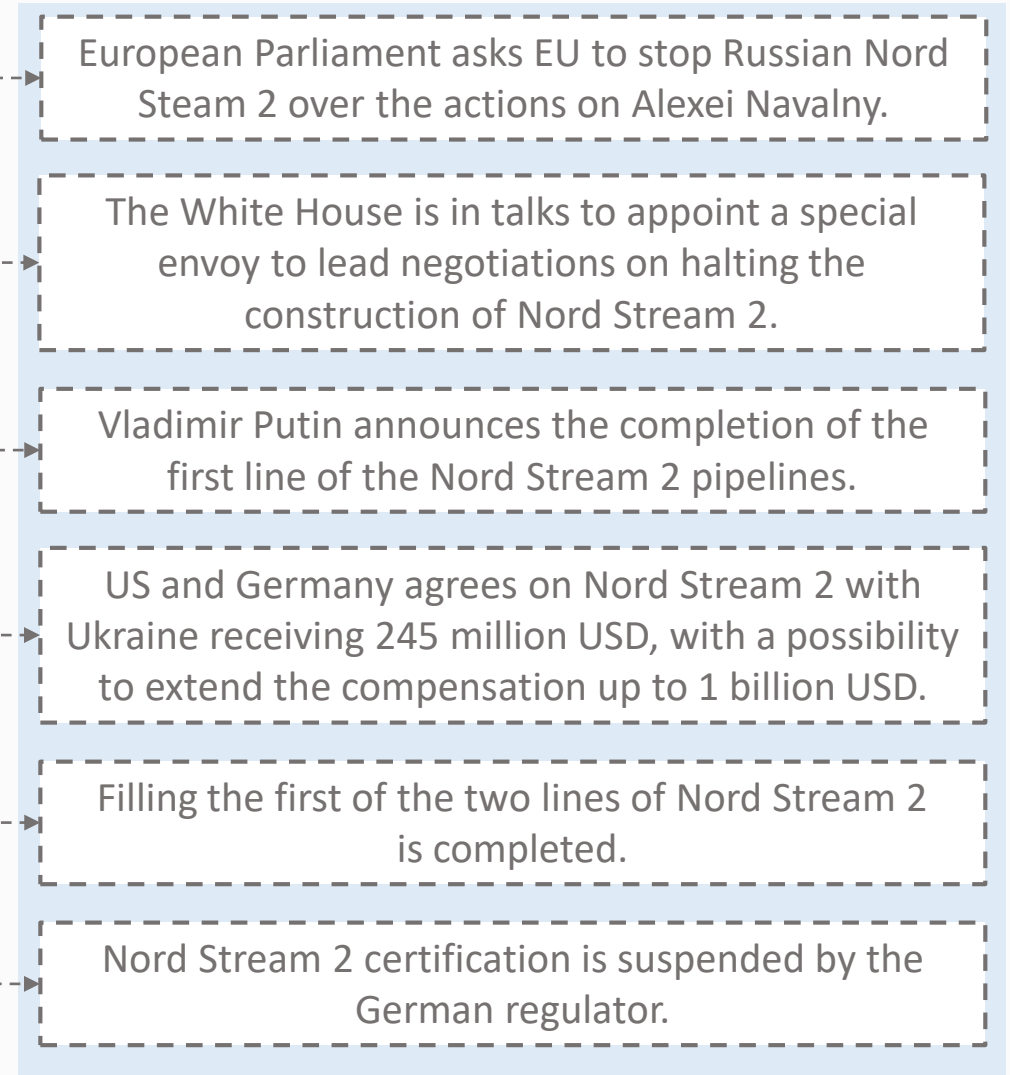
Hot topics of the year

Sources: ICIS, CEENERGYNEWS, MFGT, POLITICO, NRGreport, Portfolio, NS2 AG, EEX, Reuters

LNG



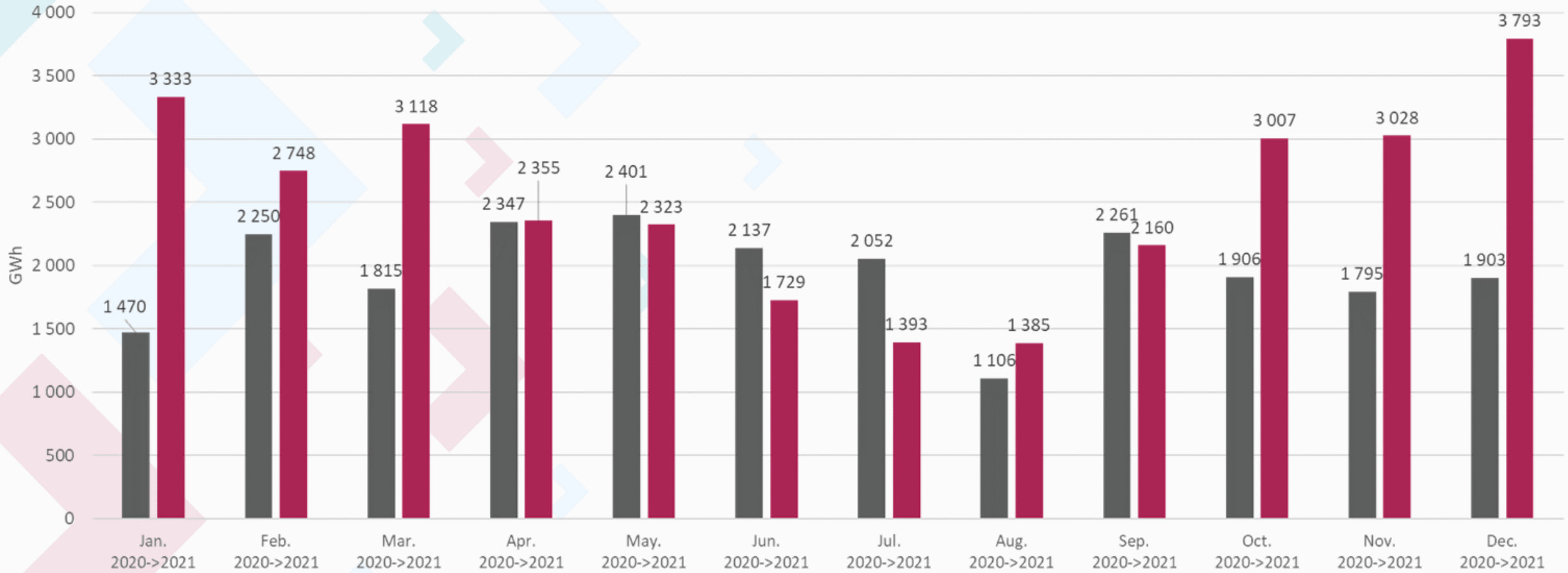
Jan
Feb
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Apr
May
Jun
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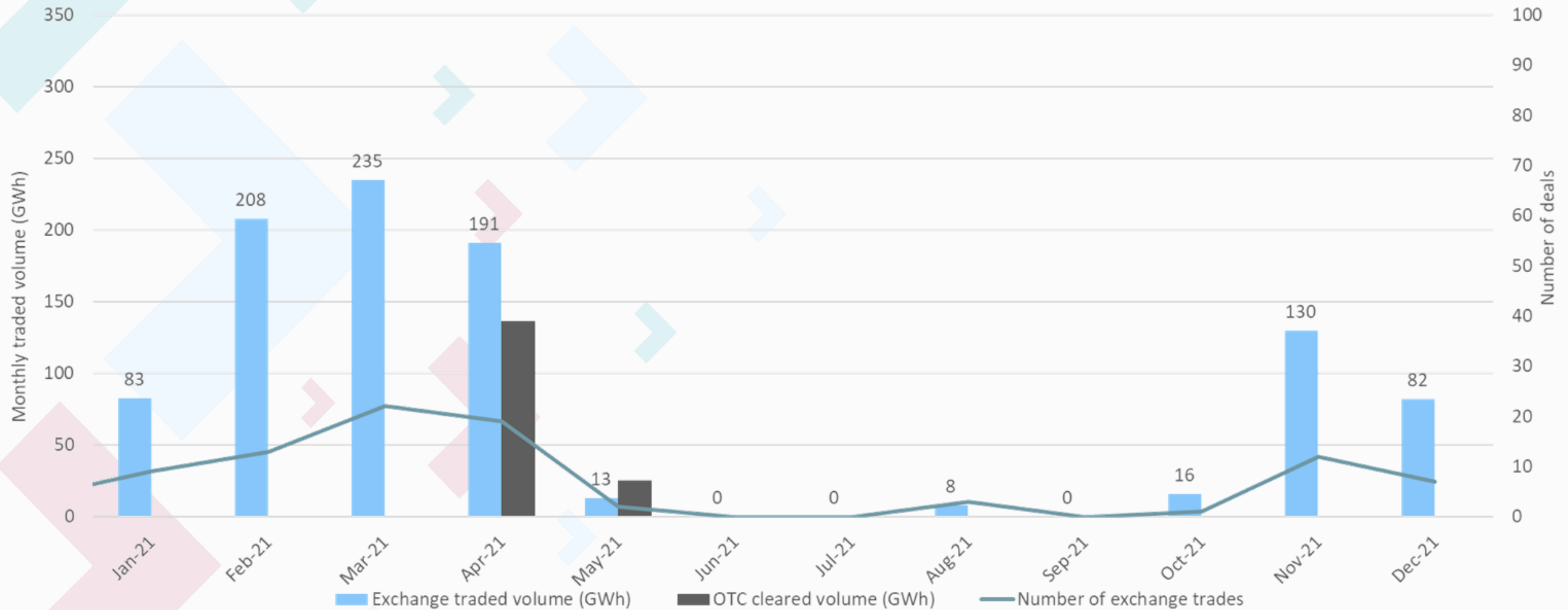
Nord Stream 2



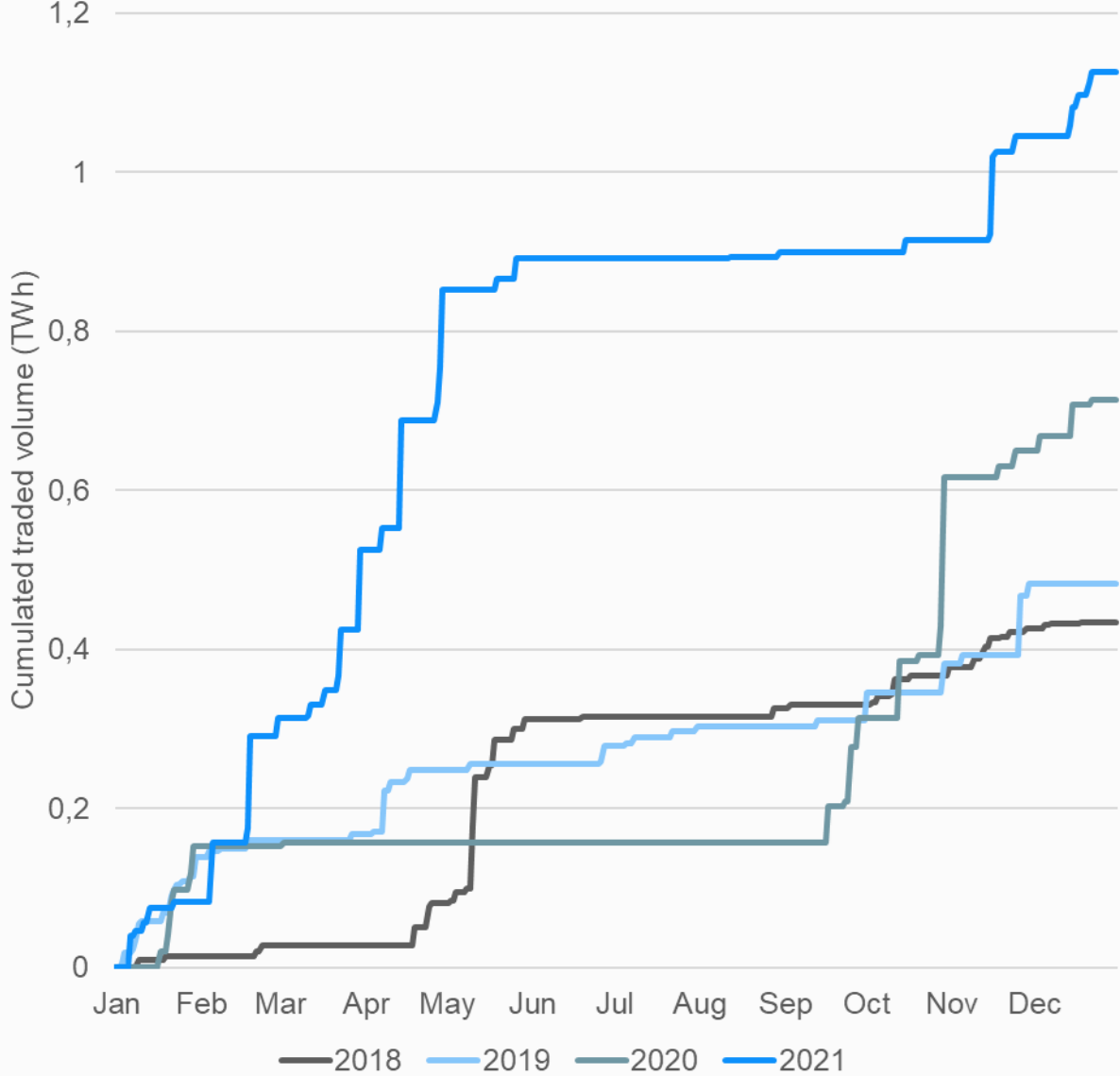
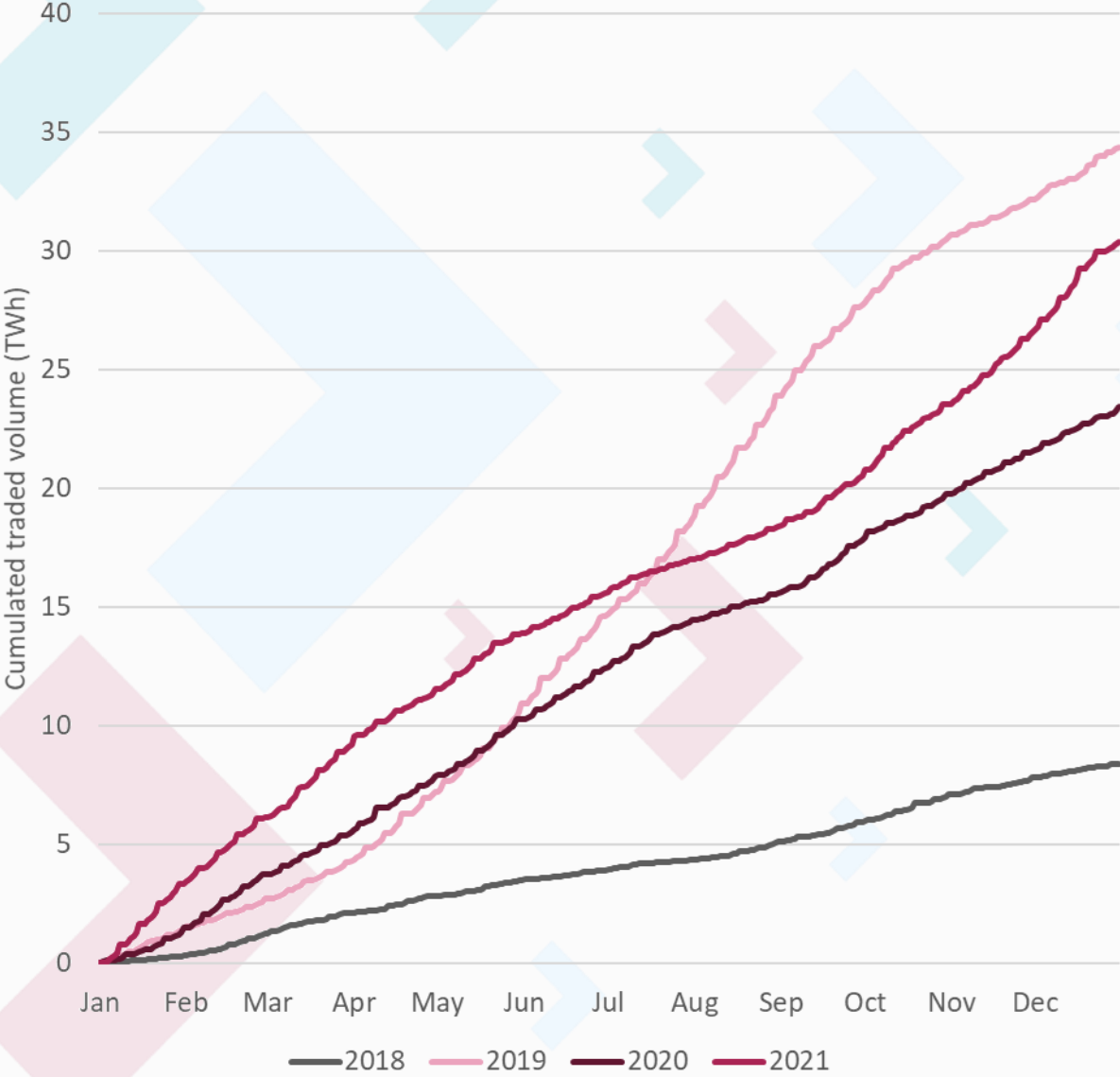
CEEGEX monthly traded volumes



HUDEX Natural Gas Segment

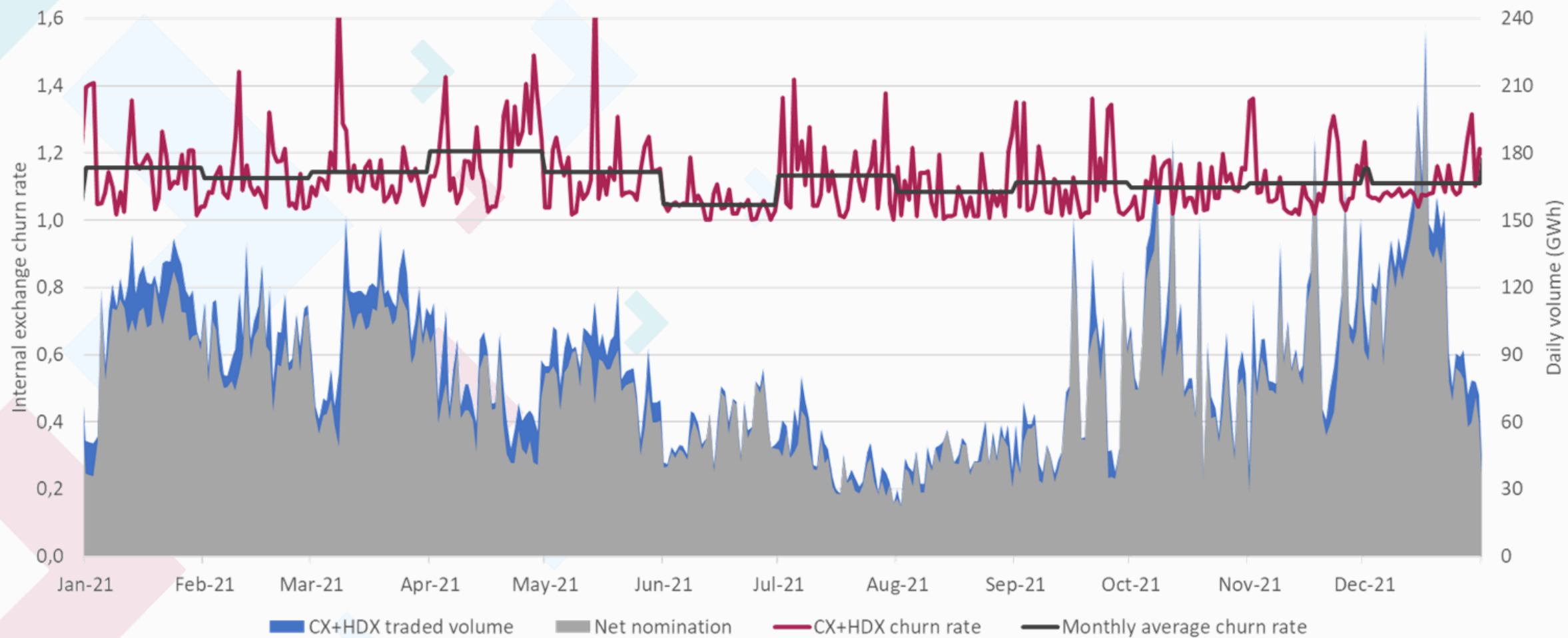


CEEGEX and HUDEX Natural Gas cumulative annual volumes

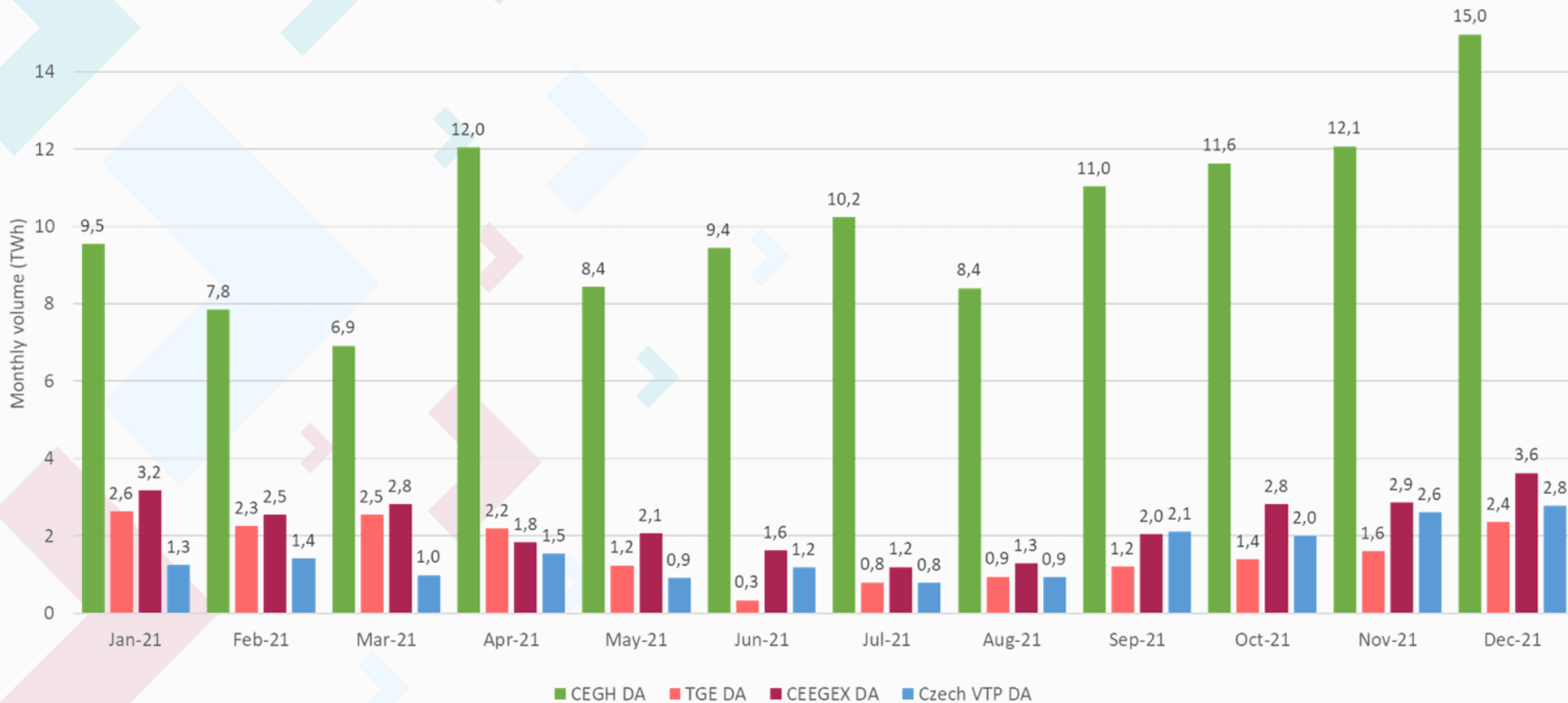


CEEGEX-HUDEX internal churn rate

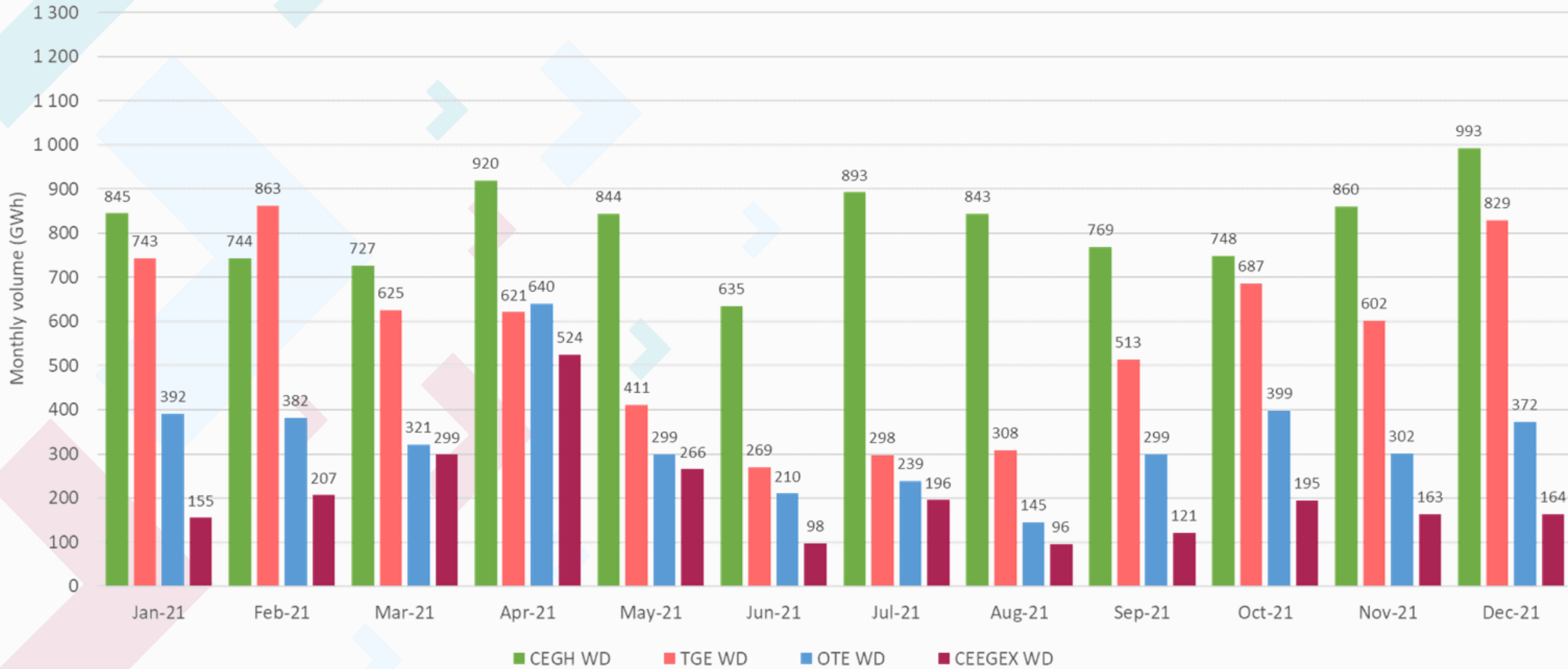
Source: CEEGEX, HUDEX



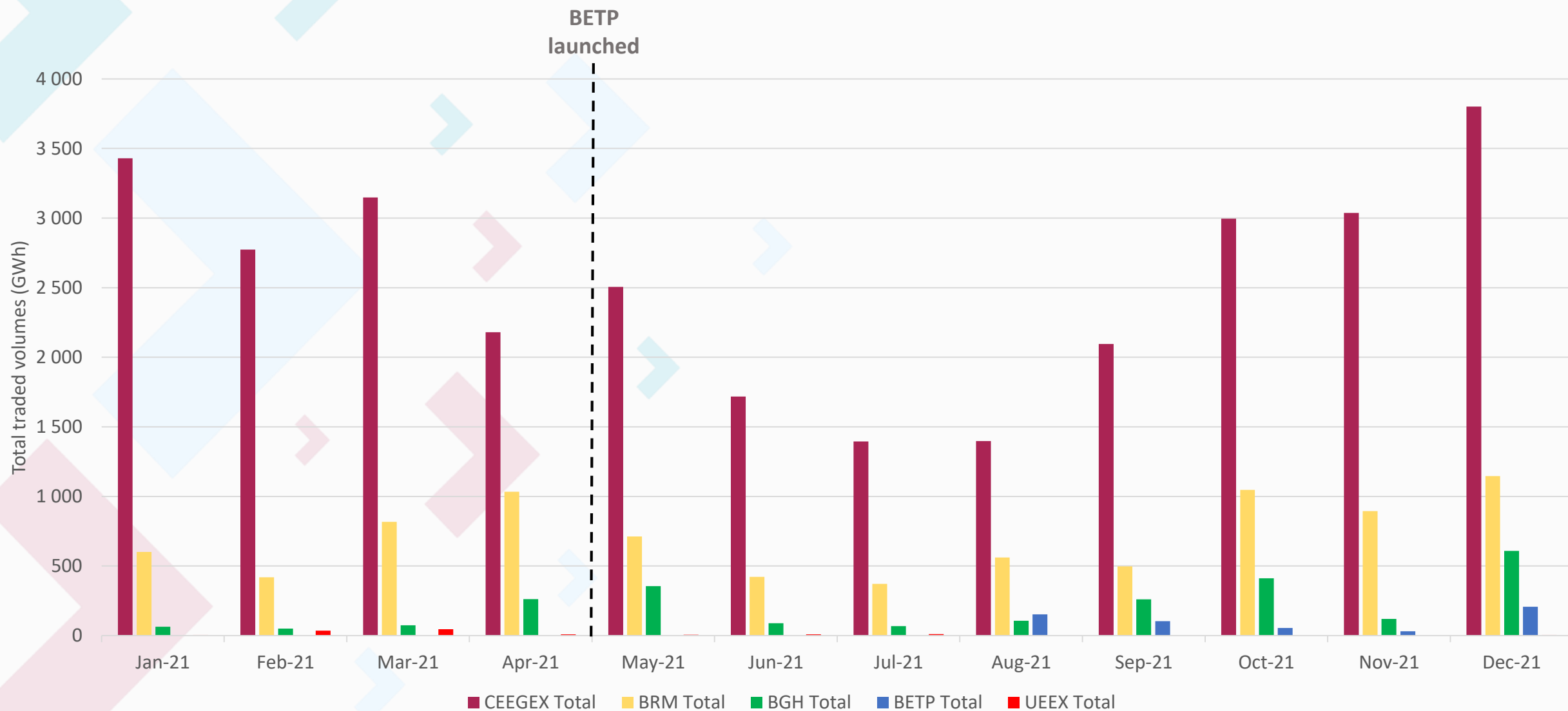
Regional Day-Ahead traded volumes



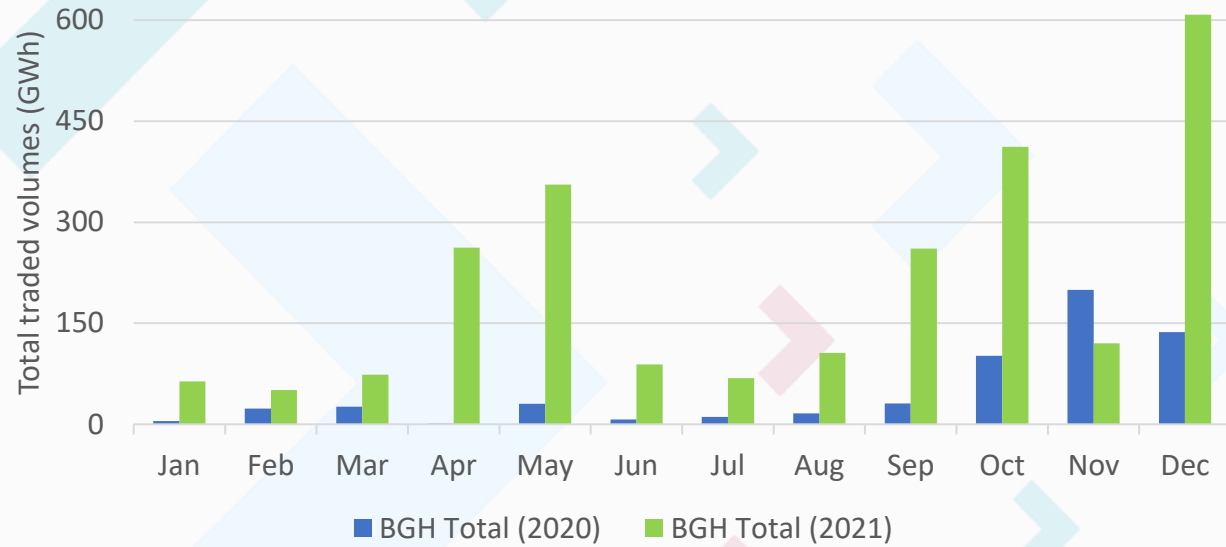
Regional Within-Day traded volumes



Emerging gas hubs & CEEGEX spot traded volumes

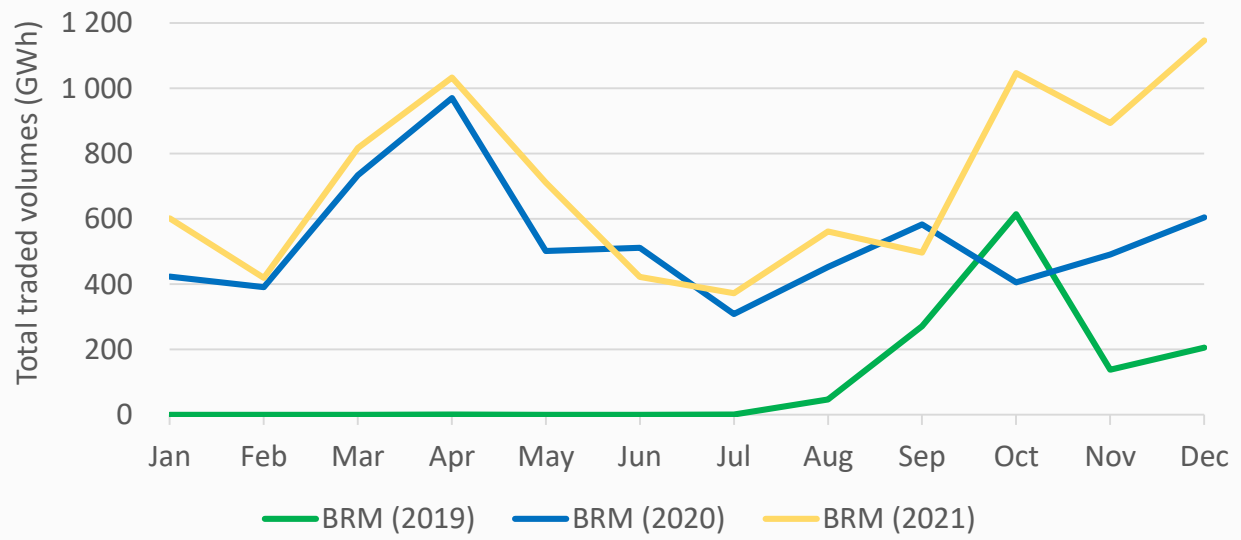


BGH and BRM spot traded volume increased

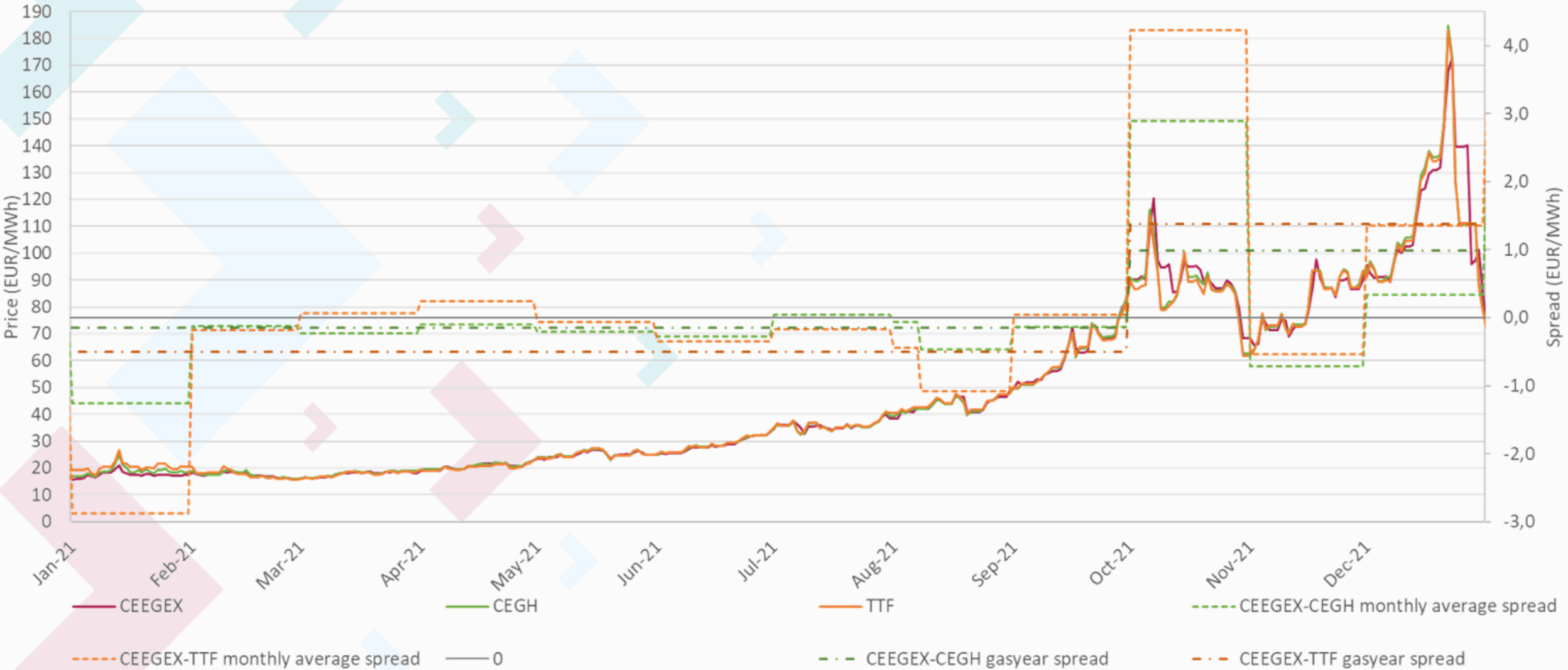


In March a decision was made to authorize the Balkan Gas Hub EAD to organize a natural gas exchange market. In October, BGH expanded with a new product, BoM.

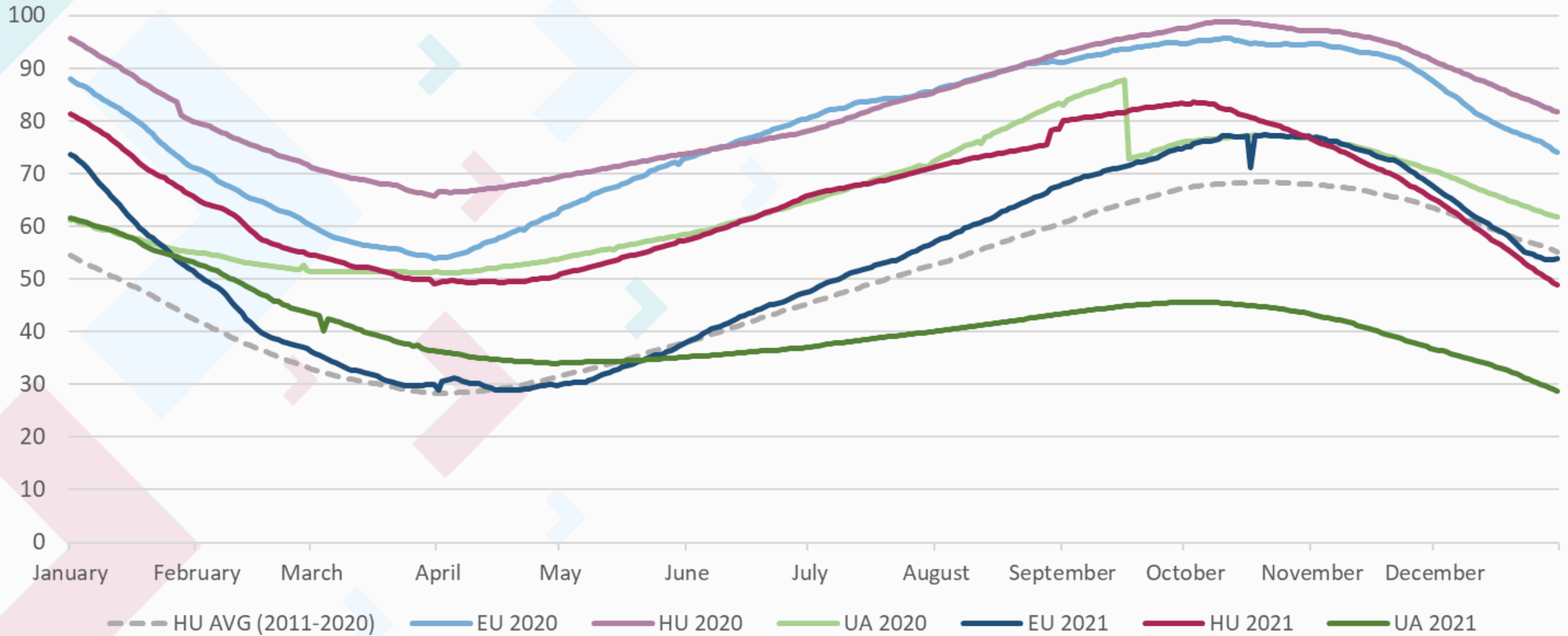
In July a Memorandum of Understanding about trans-regional cooperation on the development of an integrated South-Eastern and Eastern European gas (SEEGAS) market was signed by energy exchanges and trading service providers BRM, UEEX, TGE, CEEGEX and ECG.



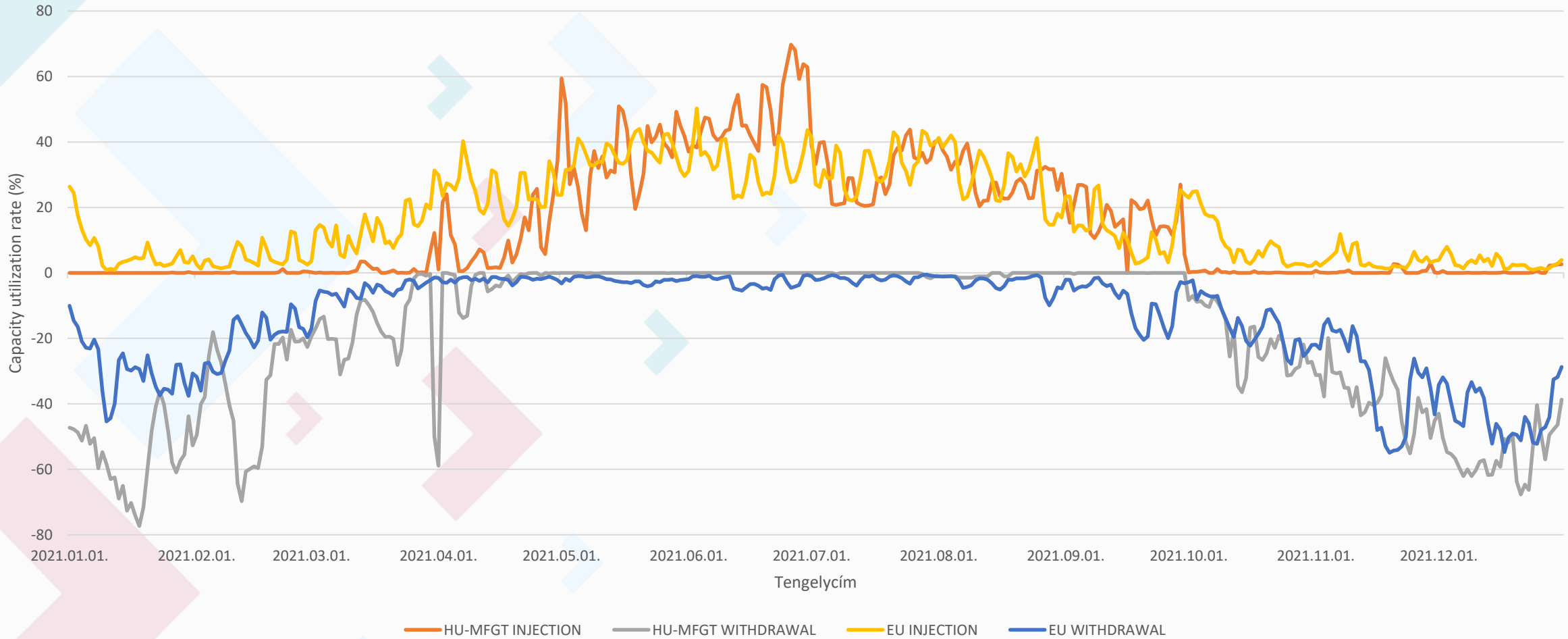
Spot prices and spreads



Storage level in EU

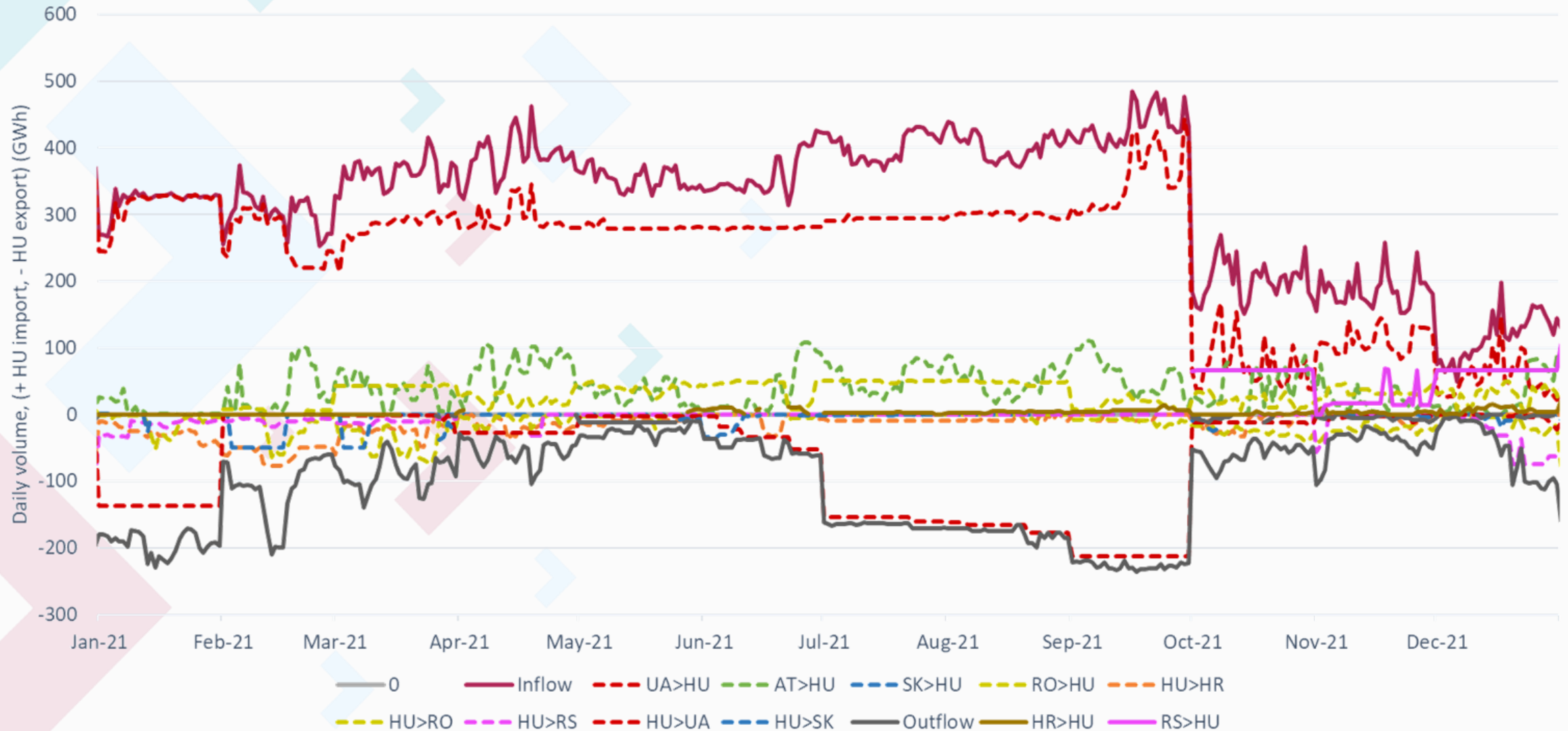


Underground Gas Storage injection and withdrawal capacity usage

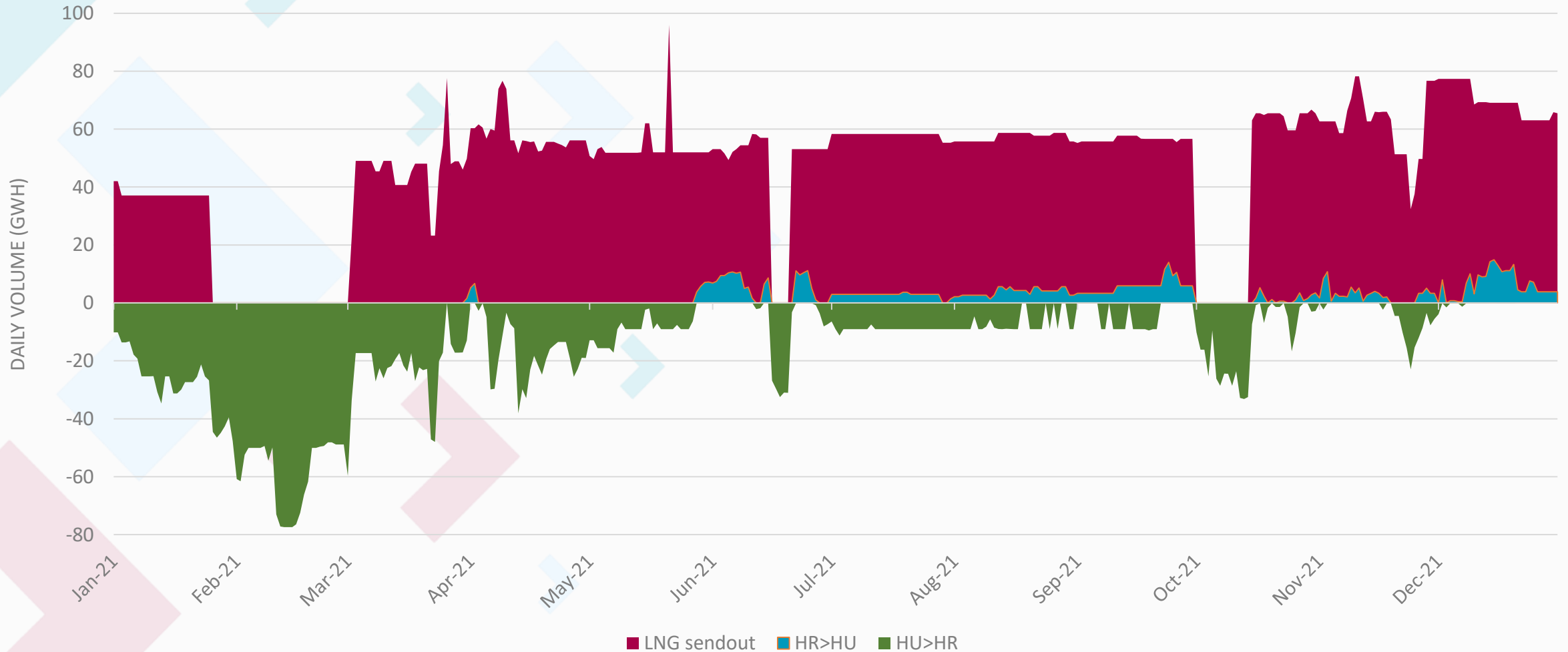


Hungary started the 2021/22 gas year with relatively more gas in storage than the European average. However the relative injection rates were more or less similar.

Significant changes in case of Hungarian cross-border allocations



HR-HU allocation with LNG sendout

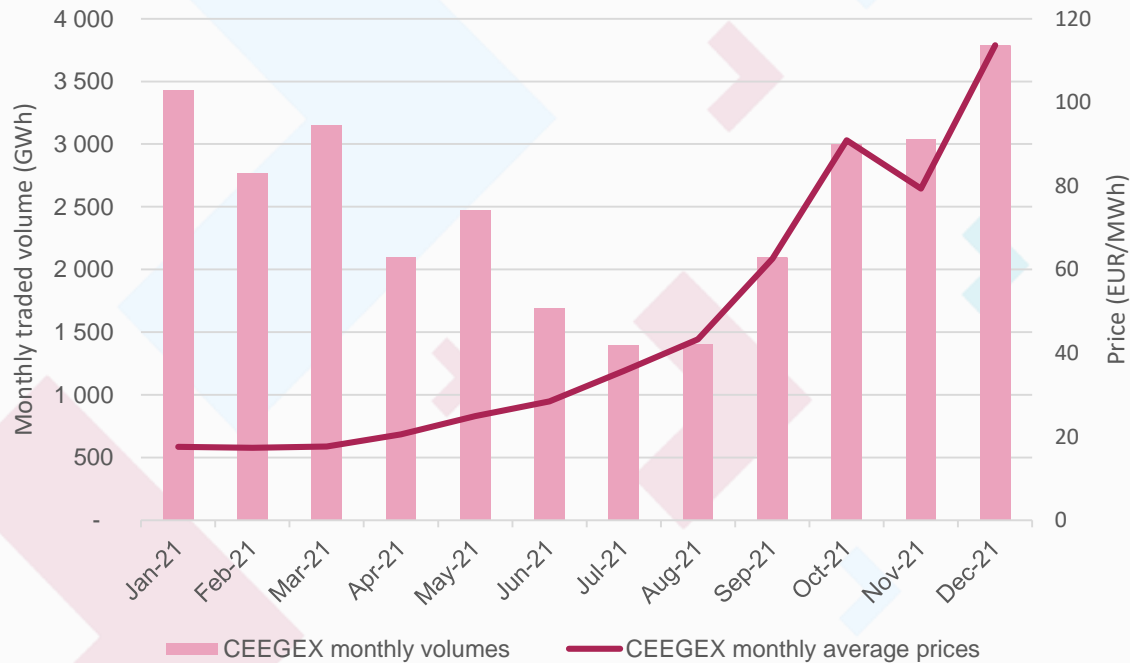


The gasflow from Hungary is mostly outgoing, even when there is adequate LNG sendout. We can assume that, there is little or none natural gas in Hungary from LNG.

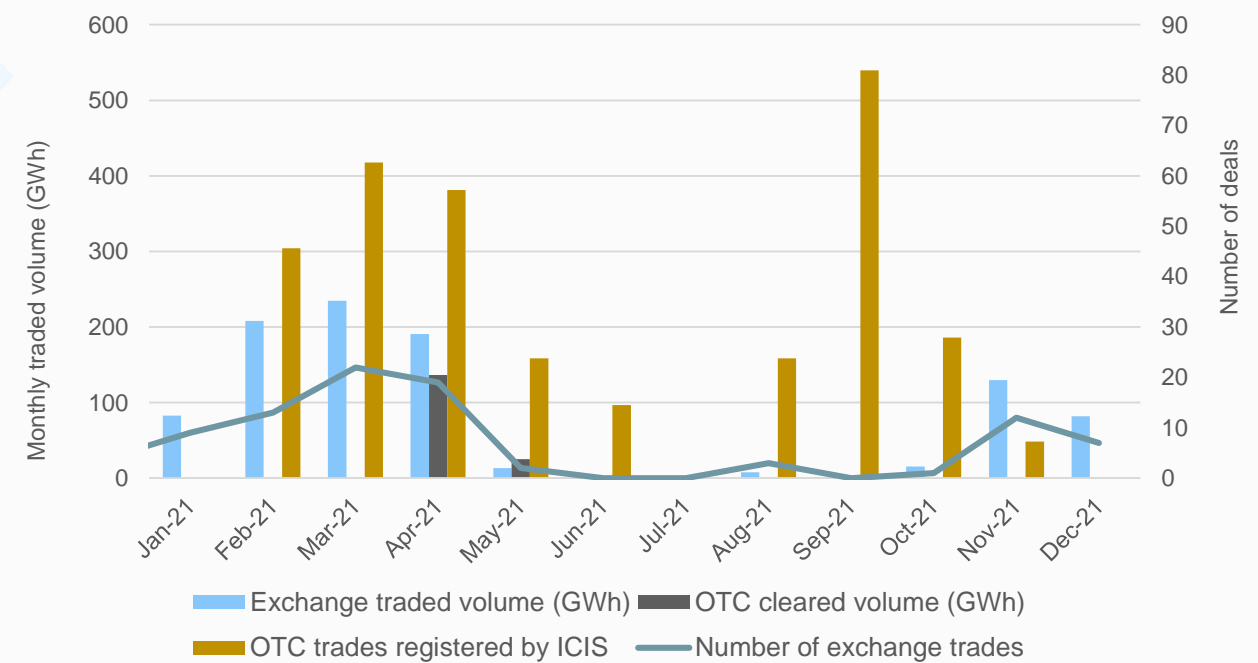
Spot exchange trades increased in 2021 Q4

- In **2021 Q4 exchange trades increased** in line with energy prices **despite growing collateral requirements**. Central Clearing Counterparties define the value of financial instruments required to back up a deal on the basis of the trade's value, therefore high energy prices resulted in higher margin requirements. If the current high price environment and volatility would persist, **more frequent margin calls might be possible**, especially in case of smaller counterparties. In addition, **market concentration** could grow, leaving only the strongest (in terms of capital) groups of companies in the markets.
- Parallel, in **2021 Q4 OTC trades fell** as market participants became more **risk averse**. Brokers have to compete with exchanges offering clearing services that eliminate default risk. Apart from a spike in September volumes, OTC trades showed a decreasing trend last year. Furthermore, there was a **shift to non-bilateral spot trades** from futures trades.

CX prices and traded volumes



OTC and HDX traded volumes



- By the end of 2021 **Gunvor**, a multinational commodity trading company had margin calls of around \$1 billion, while the German energy supplier **RWE** had to involve additional financial collaterals, too. Also in 2021 Q4 the Hungarian Regulator suspended for 90 days the natural gas trading license of **JAS**, a Hungarian energy supplier.
- At the beginning of 2022 **Uniper**, another German energy company received a loan of €10 billion from their parent company. The value of the loan corresponds to about two-thirds of the company's market value. According to Uniper, higher commodity prices increased the value of their underlying energy assets.

Gas package

- On 15 December 2021, the European Commission released its Hydrogen and Gas Market Decarbonisation package ("**Gas Package**"), along with legislation on methane emissions, the energy performance of buildings, and sustainable carbon cycles. **The proposal for a new framework** (revision of the Gas Regulation and the Gas Directive) **aims to decarbonise gas markets, promote hydrogen, reduce methane emissions and align EU gas legislation with Europe's new energy transition targets.**
- The proposals must **be debated and agreed by both the European Parliament and the Council of the European Union**, before they can become binding (~18-24 months).
- Gas industry broadly welcomed the package, but environmental organisations or geothermal industry have criticised it.

Key new rules of the Gas Package include:

- creating the conditions for a **shift from fossil natural gas to renewable and low-carbon gases** (RES&LC)
- **easing the access of RES&LC gases to the existing gas infrastructure** by removing tariffs for cross-border interconnections and lowering tariffs at injection points, proposing rules of transparency of gas quality parameters and hydrogen blends or rules of repurposing of gas networks for hydrogen transport
- **establishing a competitive market for hydrogen**, creating the right environment for investment, enabling the development of dedicated infrastructure, including for trade with third countries, unbundling, non-discriminatory network access and cross-subsidisation
- these market rules for hydrogen will be applied in **two phases: before 2030** („Transition Phase”) **and after 2030** („End Phase”).
- a new governance structure in the form of the **European Network of Network Operators for Hydrogen (ENNOH)** will be created by 2025
- **extension of the EU ETS and introduction of a certification scheme** to confirm whether the gas brought on the market is renewable or low-carbon
- **no long-term supply contracts would be allowed for unabated fossil gas** lasting beyond 2049, while long-term contracts for RES&LC accepted
- **strengthening the resilience of the gas system** by automatic solidarity across borders through new pre-defined arrangements and clarifications or voluntary joint procurement of strategic gas reserves to be used in case of emergency, or by adaptation to new risks (cybersecurity)
- new rules will allow **EU financing for projects to convert natural gas transport and storage assets to hydrogen** until 31 December 2027 and fast-track permitting as EU projects of common interest (PCIs)
- new rules to **tackle methane leakage**, ban on venting and flaring
- **consumer** empowerment and protection
- fostering **integrated network planning** between electricity, gas and hydrogen networks