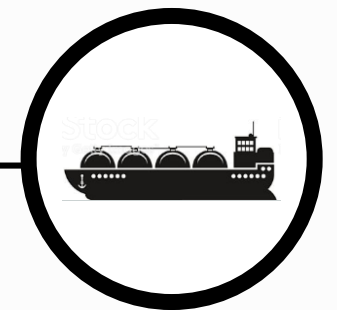


Global & Regional Market Analysis

Natural Gas

July 2021

09/08/2021



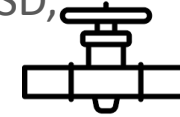


Stories of the recent weeks

EU announced the Fit for 55 package with the amendment of EU ETS, RED and EED and introduces CBAM among others, while the hydrogen and gas decarbonization package still awaits until December



US and Germany agreed on Nord Stream 2 with Ukraine receiving 245 million USD, with a possibility to extend the compensation up to 1 billion USD, however this amount is still less than the 2.1 billion USD transit fees received in 2020



Bulls hit major commodity prices, Henry Hub rose above 4 USD/mmbtu (~12 EUR/MWh), API2 coal rocketed above 140 USD/t, while Brent oil is still above 70 USD/barrel, which could significantly trigger inflation



Wintershall gas producer joint venture companies, had to halt production after the fire occurred at the Gazprom Novy Urengoy condensate processing facility.



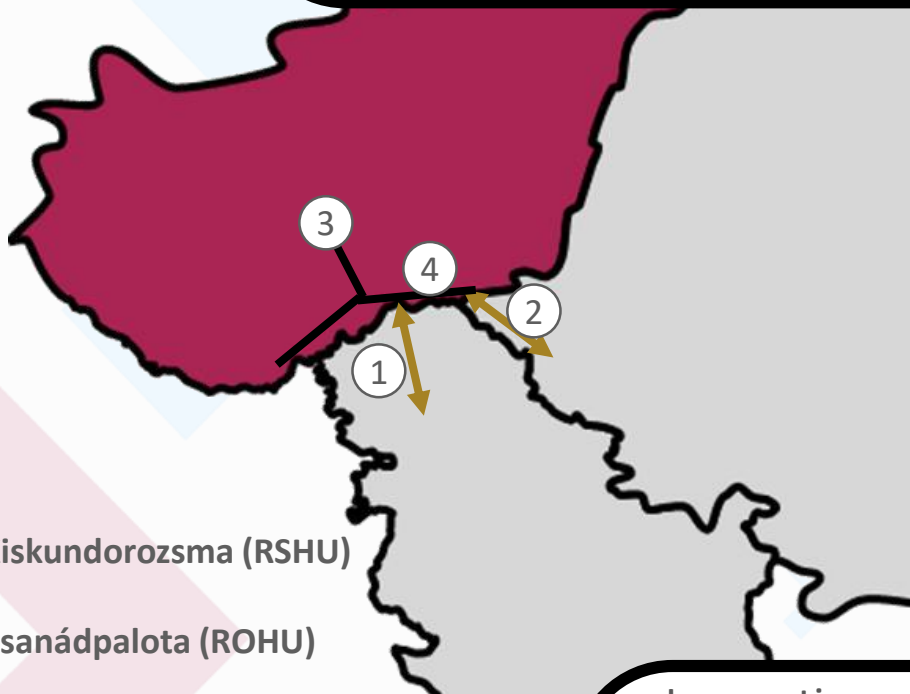
ACER analyzed balancing markets and stated that Hungary is still using two trading platforms, which may fragment short term market liquidity and transparency of price formation





Stories of the recent weeks

While the yearly capacity auctions were held successfully on 5th July, the RS>HU direction is yet to come on 6th September as the pipeline is completed and the agreement is signed between Gastrans and FGSZ



- ① Kiskundorozsma (RSHU)
- ② Csanádpalota (ROHU)
- ③ Városföld (TSO compressor station)
- ④ Szőreg (strategic storage)

RS>HU capacity is increased from 6 bcm to 8.5 bcm based on MEKH decision

RS>HU firm capacity: 245 GWh/day (8.5 bcm/year)

RO>HU firm capacity: 50 GWh/day (1.7 bcm/year)

Szőreg firm withdrawal capacity: 57 GWh/day (2 bcm/year)

Szőreg firm injection capacity: 29 GWh/day (1 bcm/year)

In theory, the TSO pipeline towards Városföld need an upgrade in order to serve all the possible firm capacities

In practice as Szőreg is a strategic storage, it's possible to extend RS>HU capacity without network development as it's unlikely to have high volumes of withdrawal from Szőreg and Serbian or Romanian import at the same time

Allocated gas volumes and capacity bookings

Source: FGSZ, RBP

Allocated gas volumes via Hungarian interconnector dropped significantly in 2021, however some notable changes:

- HR>HU direction in use with up to 10 GWh/day volumes
- AT>HU flows changes day-by-day
- HU>UA flows restarted in June, then increased in July

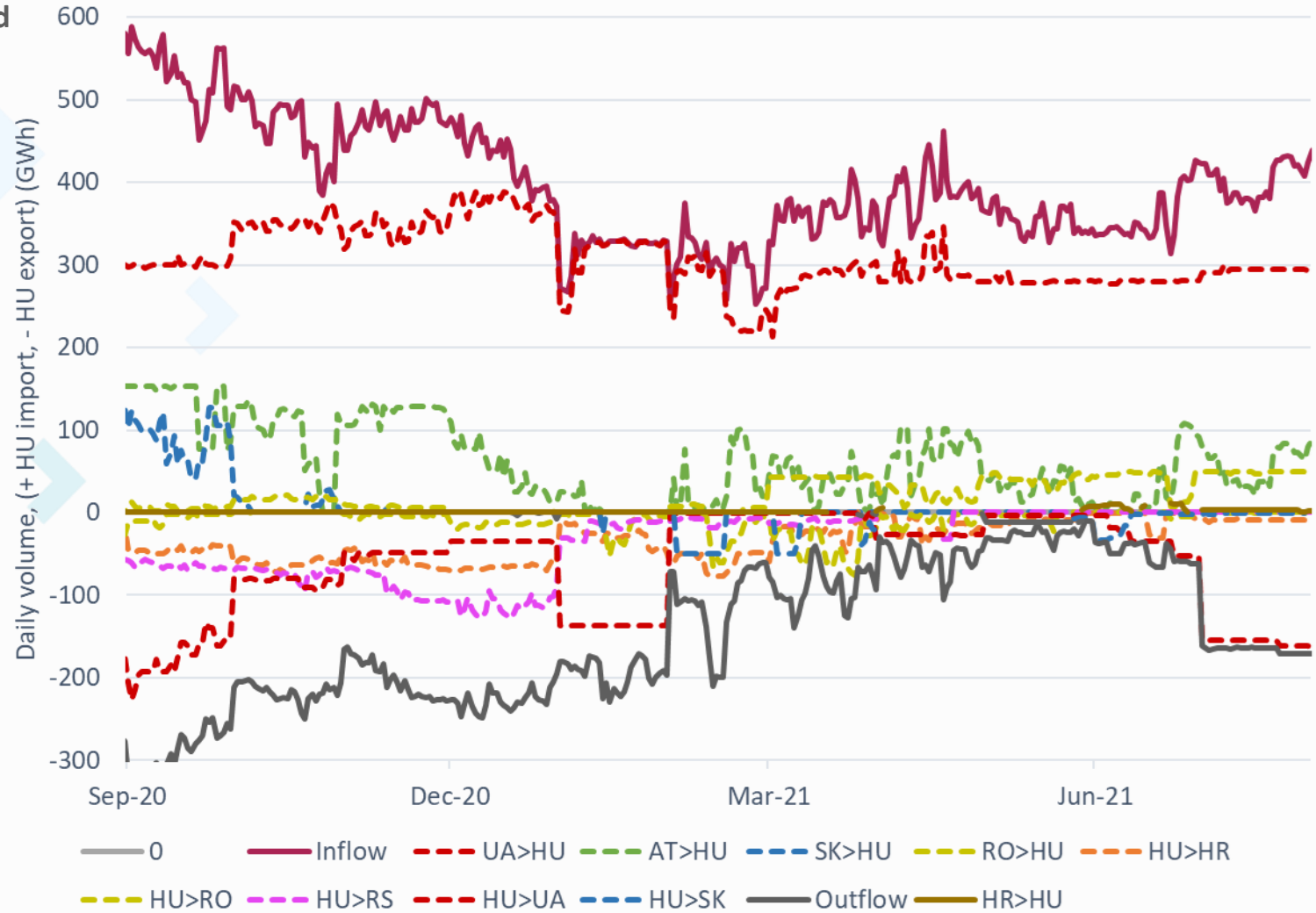
On 5th FGSZ and the adjacent TSOs held the capacity auction for yearly products, where interest was much lower than in the previous years:

- HR>HU less than 1 GWh/day after 10 GWh/day this GY
- UA>HU no booked yearly capacities
- HU>UA 1 GWh/day after 4 GWh/day this GY

Interconnectors, where the booked capacities increased:

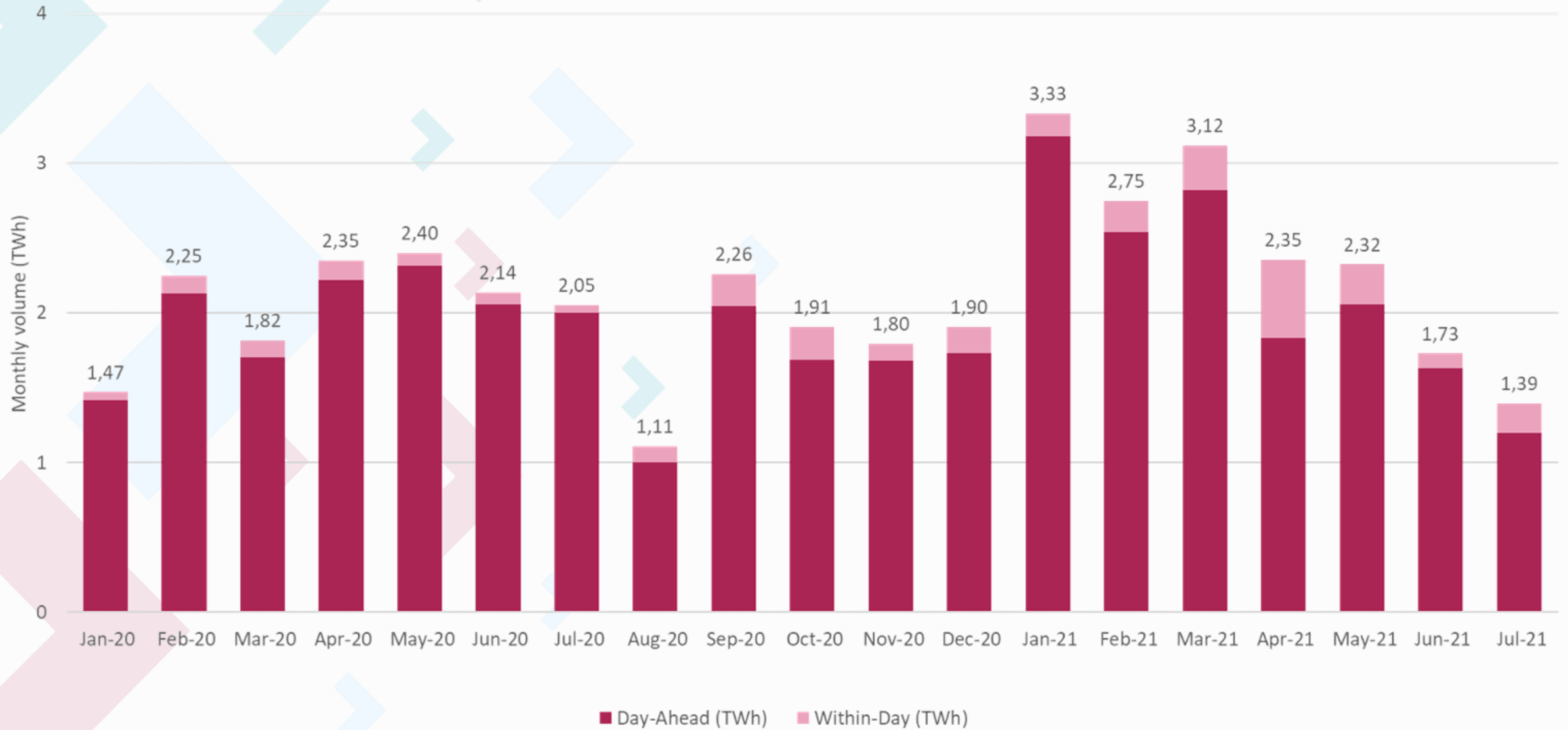
- RO>HU appeared after GY 2018/19 with 1 GWh/day
- HU>RO is fully booked for next GY
- AT>HU is largely booked for next GY

The **bidirectional ROHU booking** shows the different expectations of different market participants, while the **largely booked AT>HU** indicates the expectation that the **slightly utilized interconnector can ramp up again.**



CEEGEX monthly traded volumes

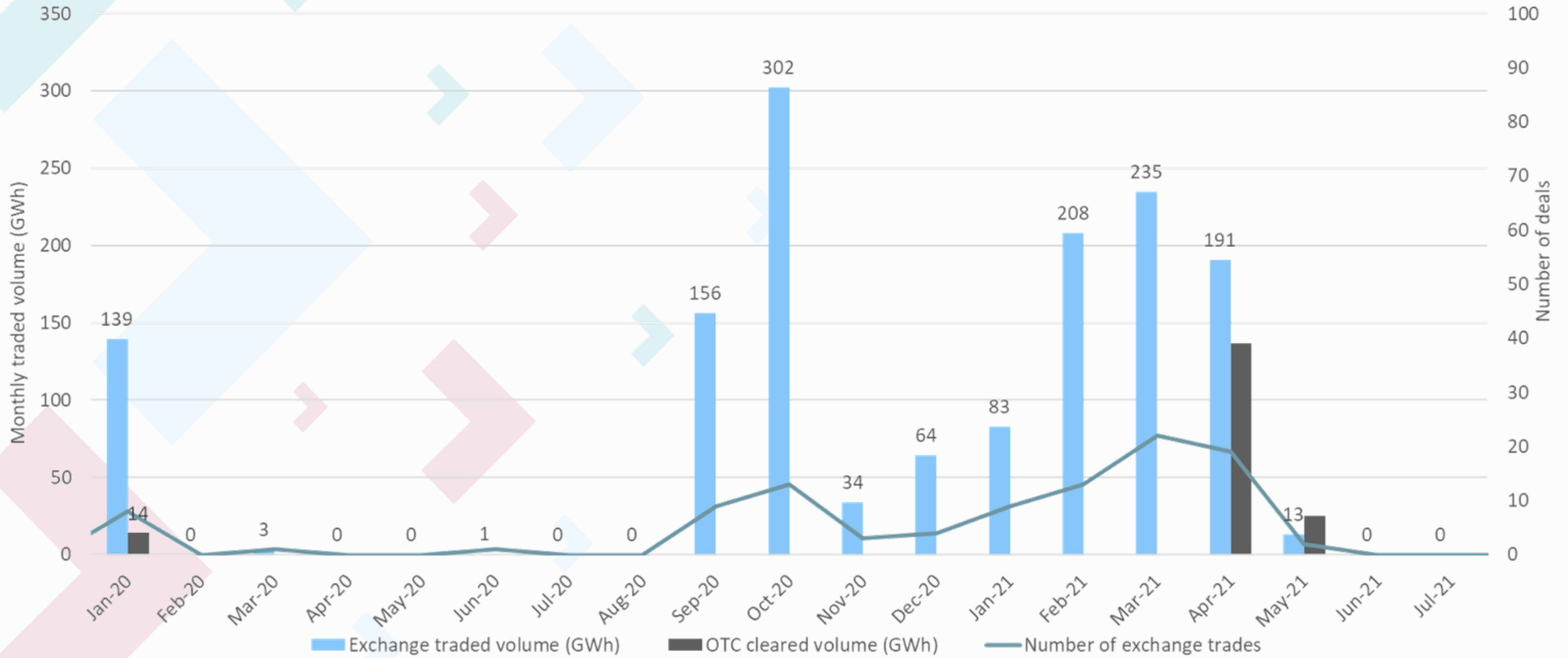
Source: CEEGEX



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HUDEX Natural Gas Segment

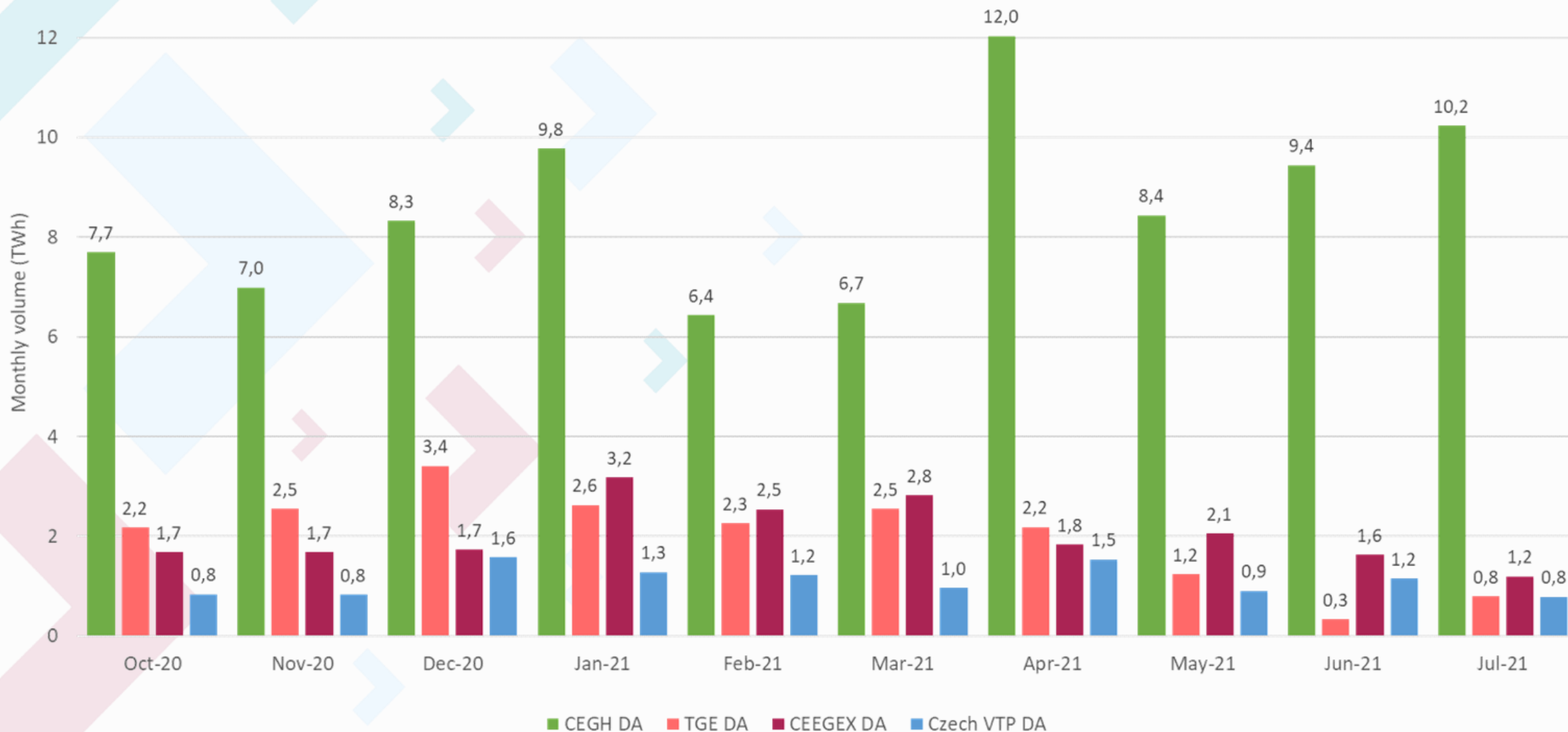
Source: HUDEX



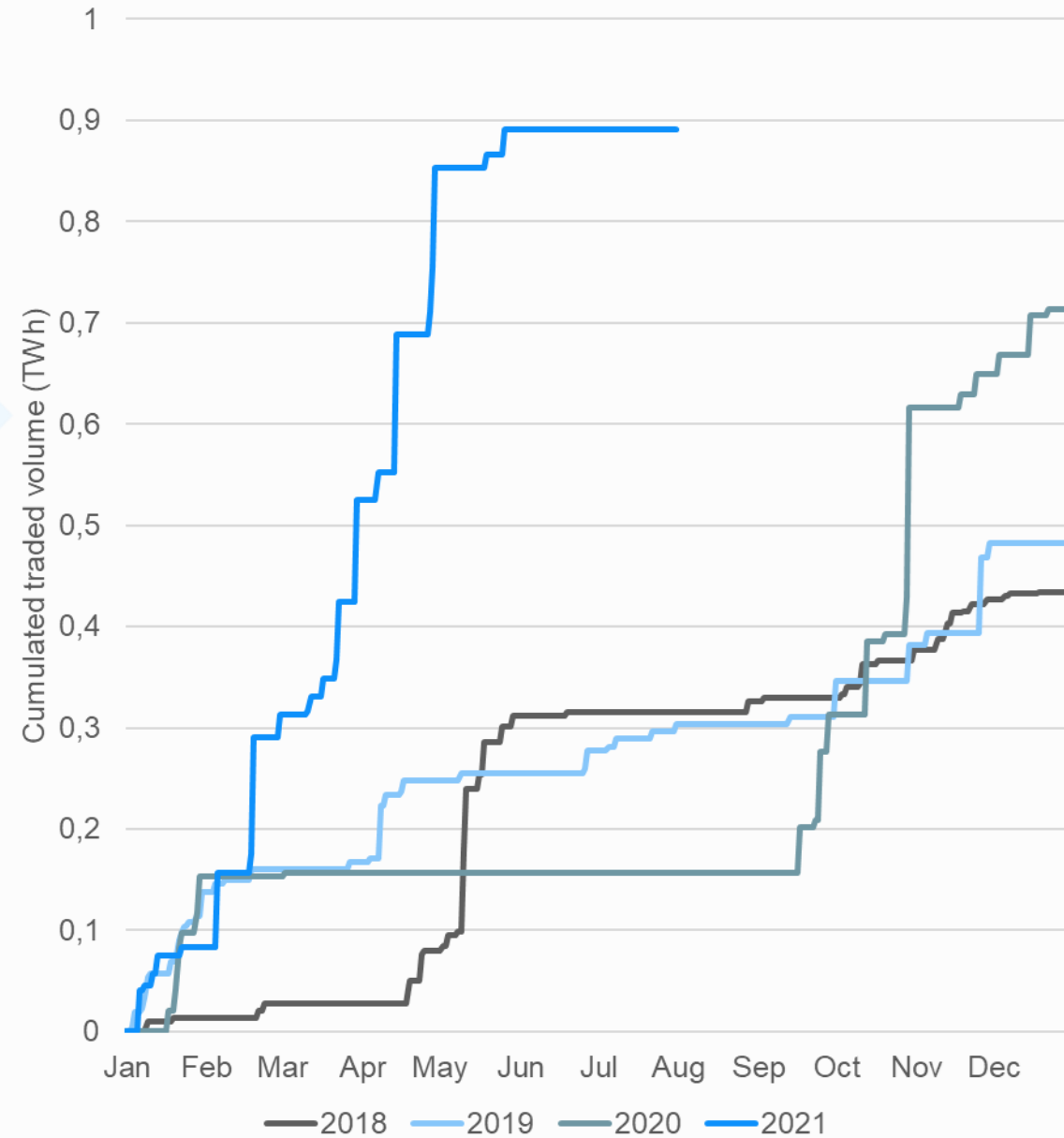
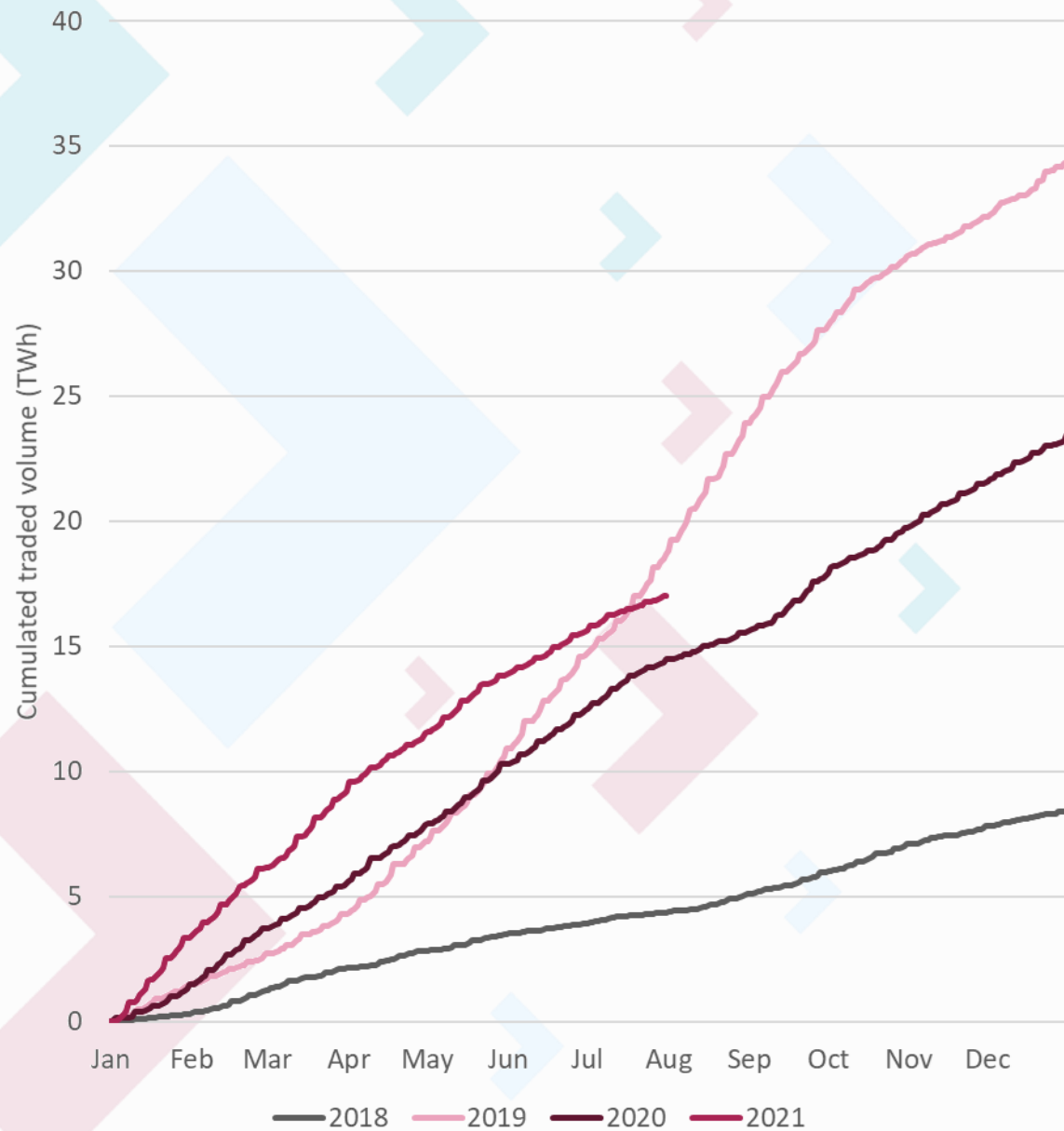
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Regional Spot traded volumes

Source: CEEGEX, EEX, TGE

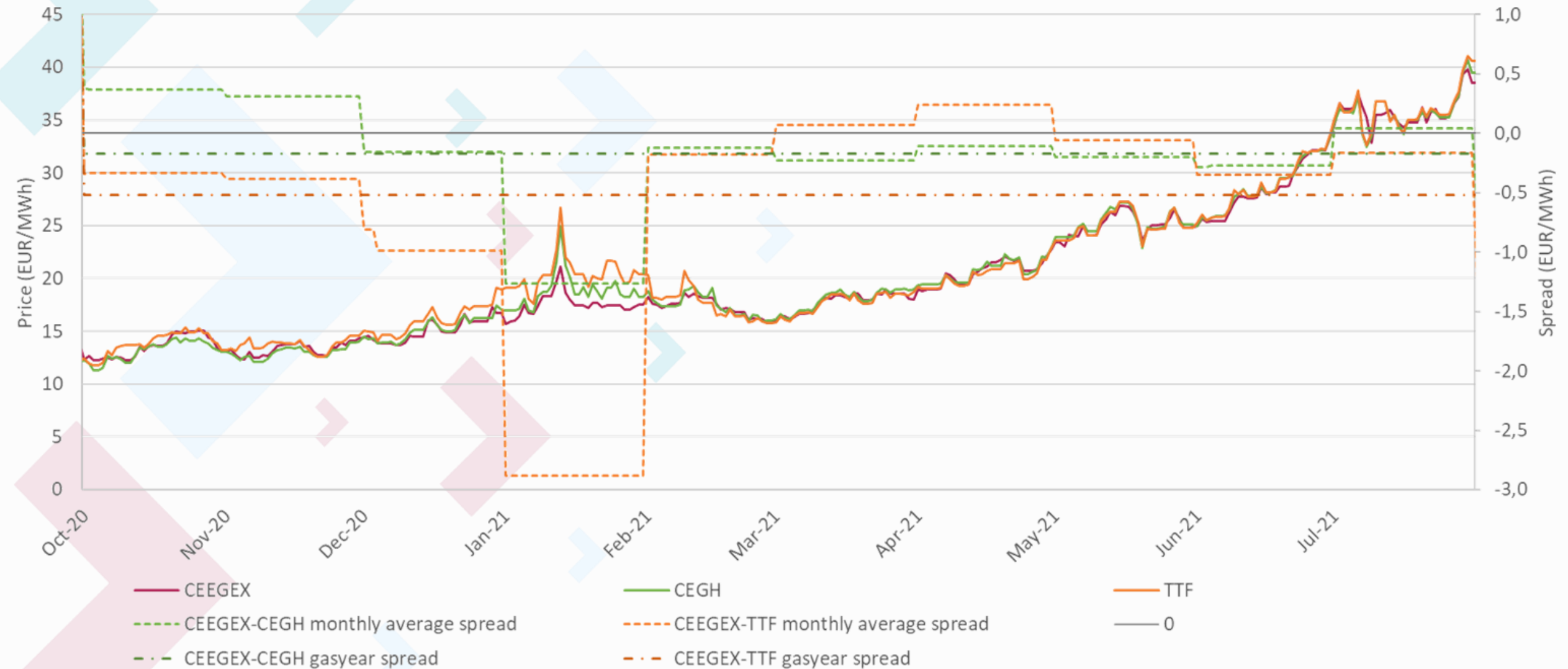


CEEGEX and HUDEX Natural Gas cumulative annual volumes



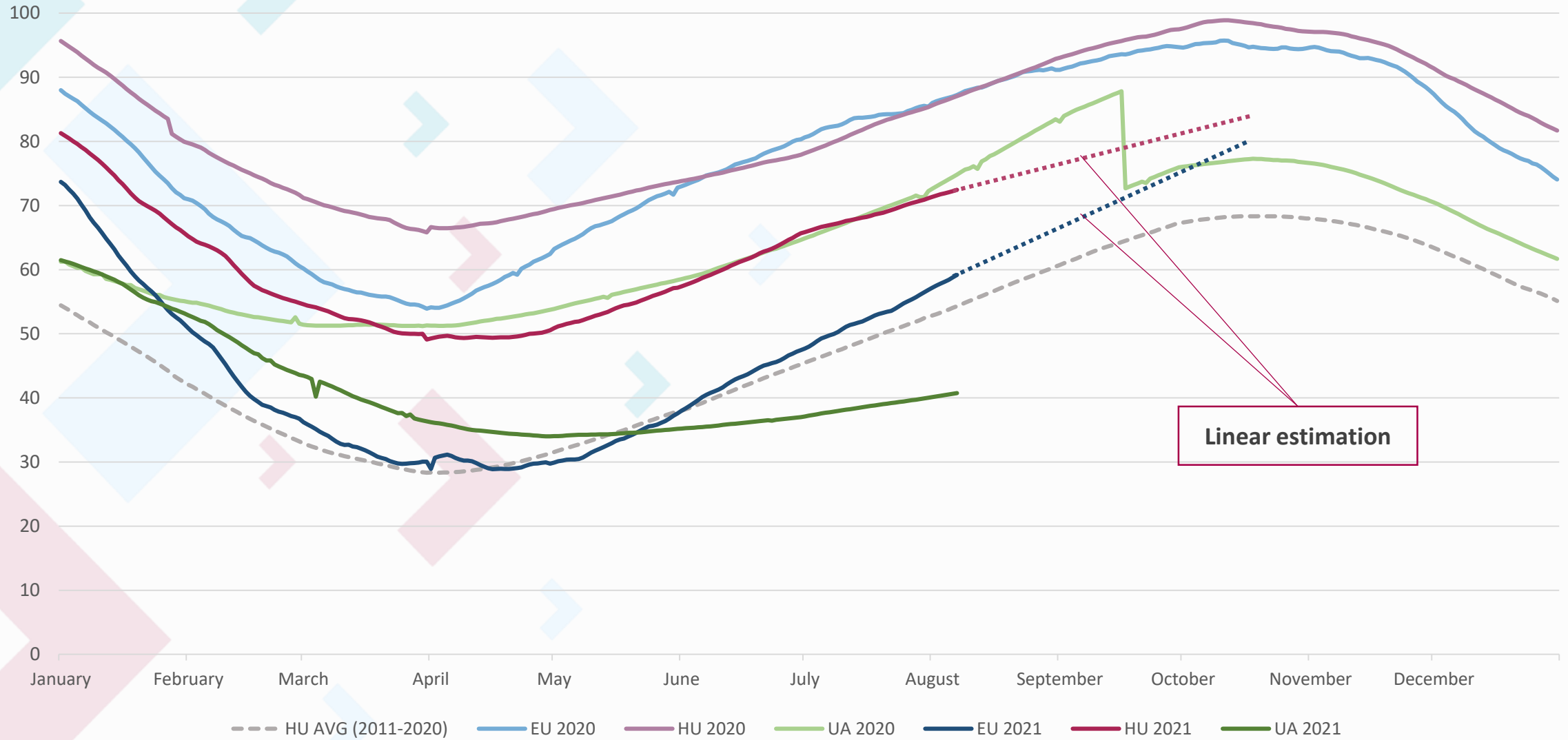
Bullish price trend in July again

Source: CEEGEX, EEX



Demand side – Gas storages

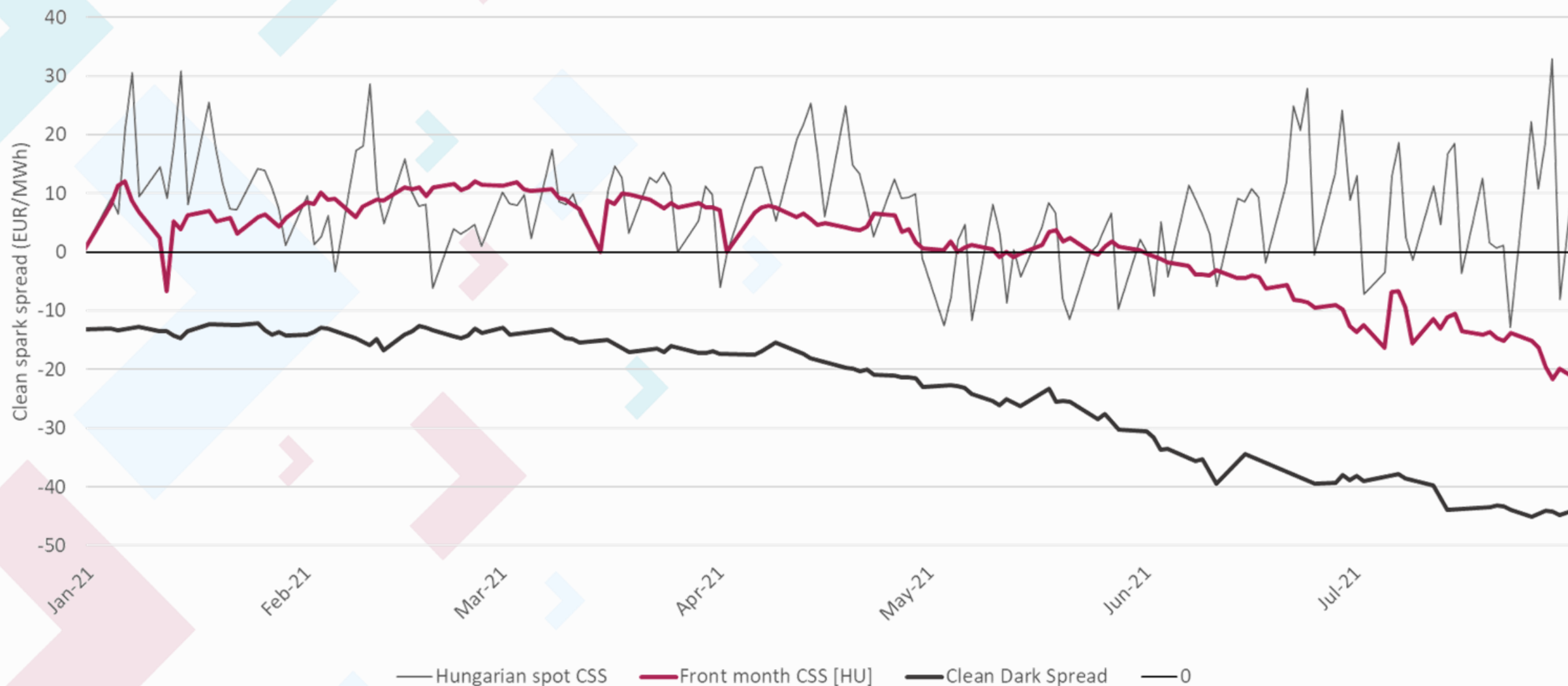
Source: AGSI



Linear estimation

Clean Spark Spread and Clean Dark Spread

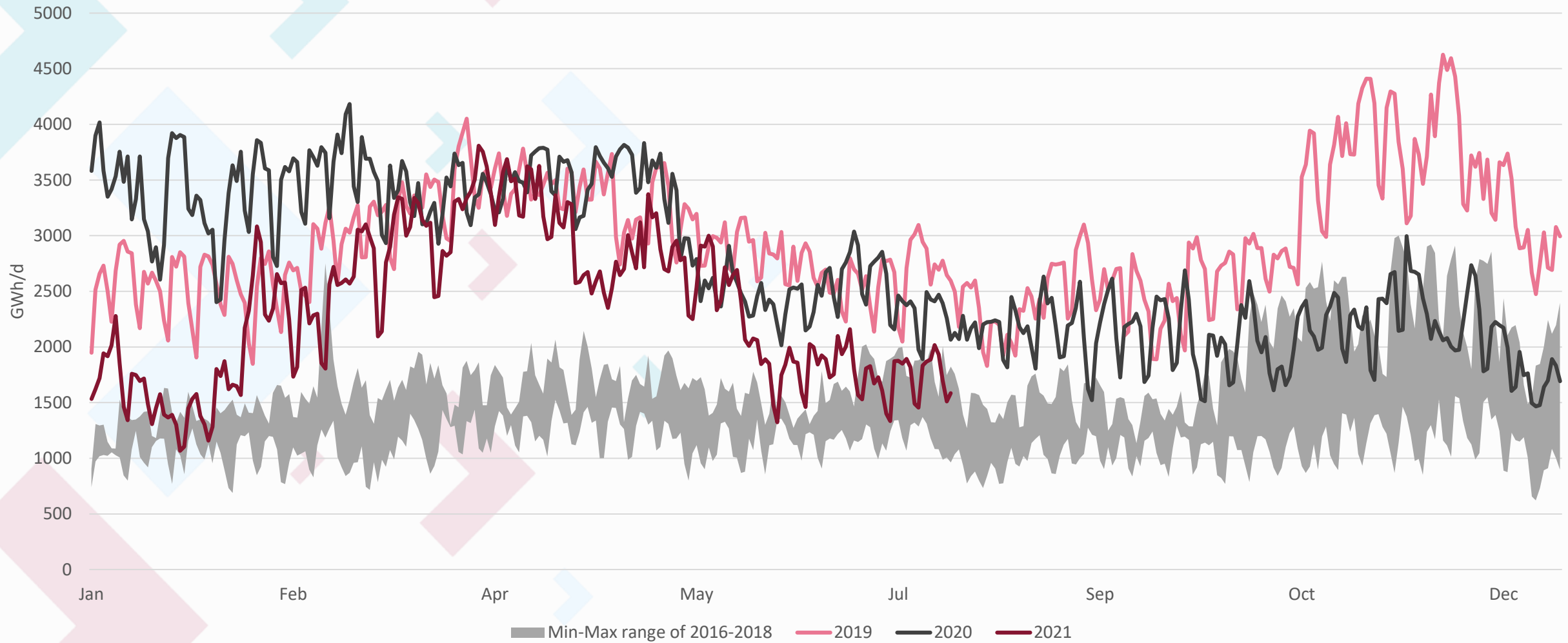
Source: Refinitiv, HUEDX, HUPX, CEEGEX



Clean Dark Spread calculated based on 30% power plant efficiency, 0,88 t_{CO2}/MWh relative emission factor and brown coal average heating value.

LNG send-out in Europe

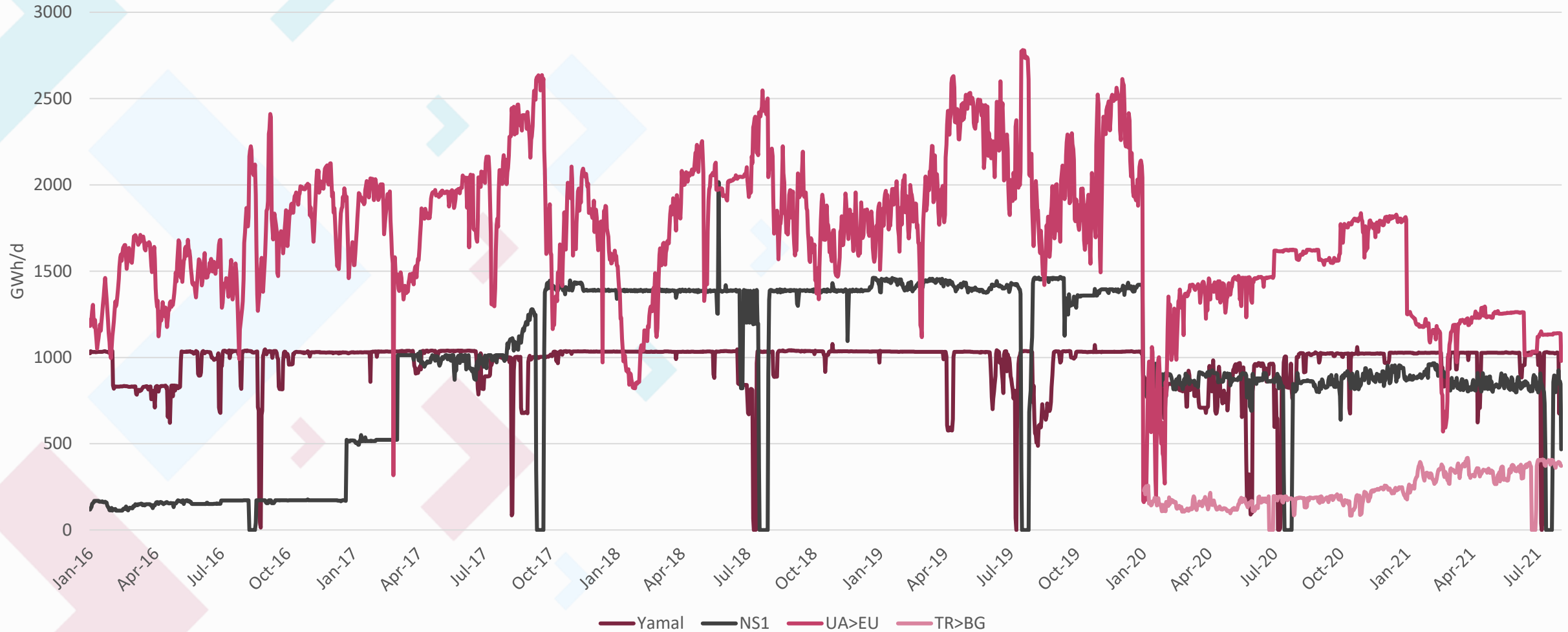
Source: ALSI



The amount of LNG storage in Europe is decreasing compared with the last two years. LNG tankers went to Asia in July.

Entry amount of natural gas

Source: ENTSO-G



This winter lasted long and the amount of Russian natural gas supply has decreased seriously which made the gas price as high as 40€/MWh.