



GO MARKET

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# HUPX GO Market Monitoring Report

COMPLETE EDITION

23/03/2023

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## Notes and methodology

For this report, price benchmarks are calculated for three different technologies and they represent a pan-European indication.

### Data input

HUPX calculates price benchmarks based on 2 types of inputs:

- OTC price benchmarks: Greenfact
- Organized GO market auction prices: HUPX, GME, EEX, ILR, CROPEX, OMIP, OKTE

Data collection for the benchmarks and data represented in this report closed on 22nd March 2023, which implies prices calculations are completed until 21st March 2023.

### Price benchmark and volatility calculation

The average of the OTC price benchmarks results a price for each day. If one or multiple auctions were organized on a day (D), the volume weighted average price (VWAP) of the relevant technology of the auction(s) is also part of the price formula in form of averaging. During this averaging the VWAP is taken into account with weights 100%-50%-25% for the respective days (D, D+1, D+2), in order to reflect the lingering impact of the auctions.

The double of the 30-day moving standard deviation ( $2\sigma$ ) is also indicated on the price benchmark charts in order to provide more details about the fluctuation of the price.

### Notes and disclaimer

HUPX reserves the right to change the methodology and the table of content.

This document may contain subjective elements, including the methodology, which don't necessarily match the official views of HUPX.

### Further information

Regarding questions and further information please contact [go.marketops@hupx.hu](mailto:go.marketops@hupx.hu)



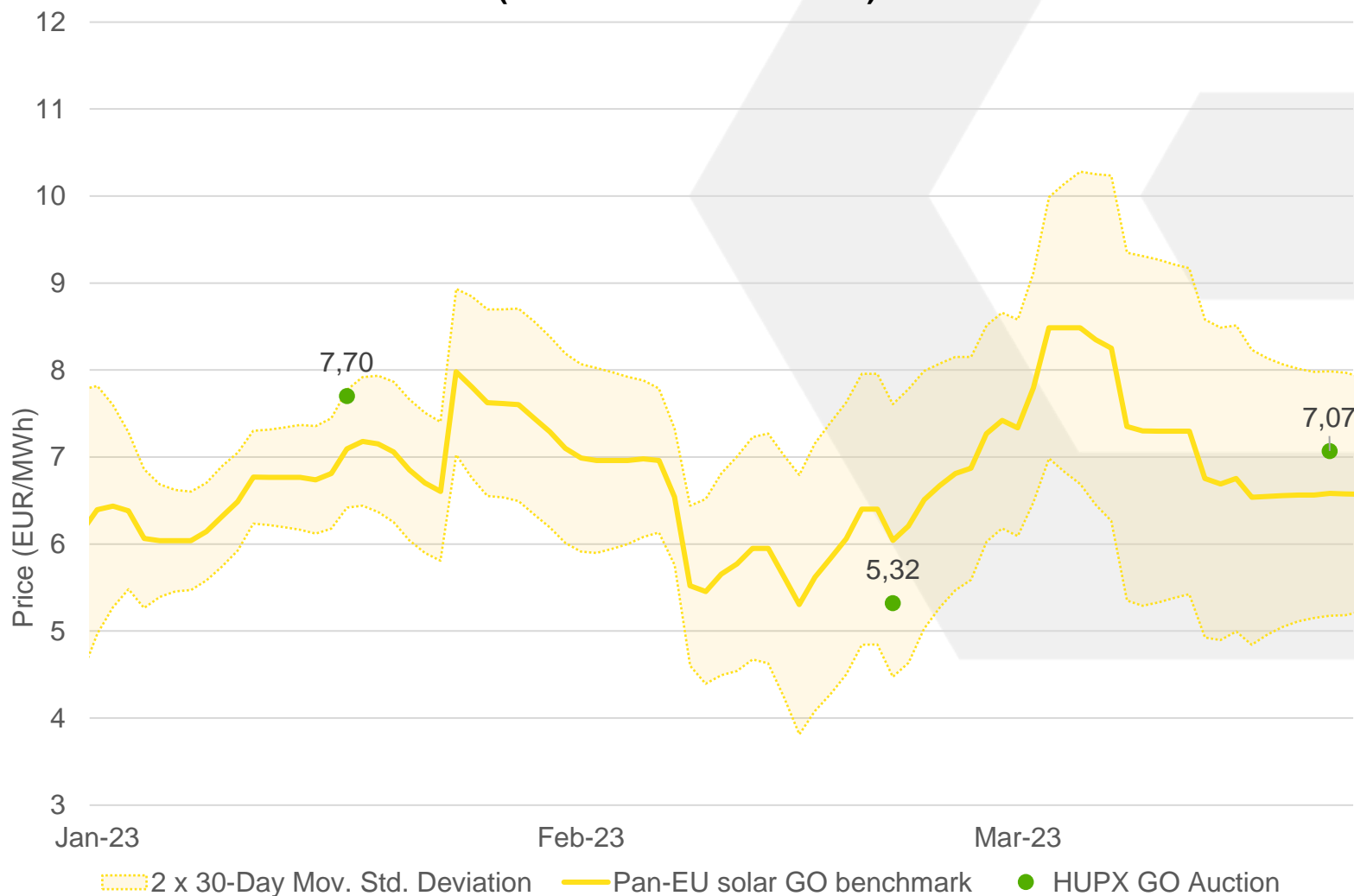
# PRICE BENCHMARKS

SOLAR – WIND – HYDRO





### Pan-EU solar GO benchmark and calculated volatility (01/01/2022 – 21/03/2023)



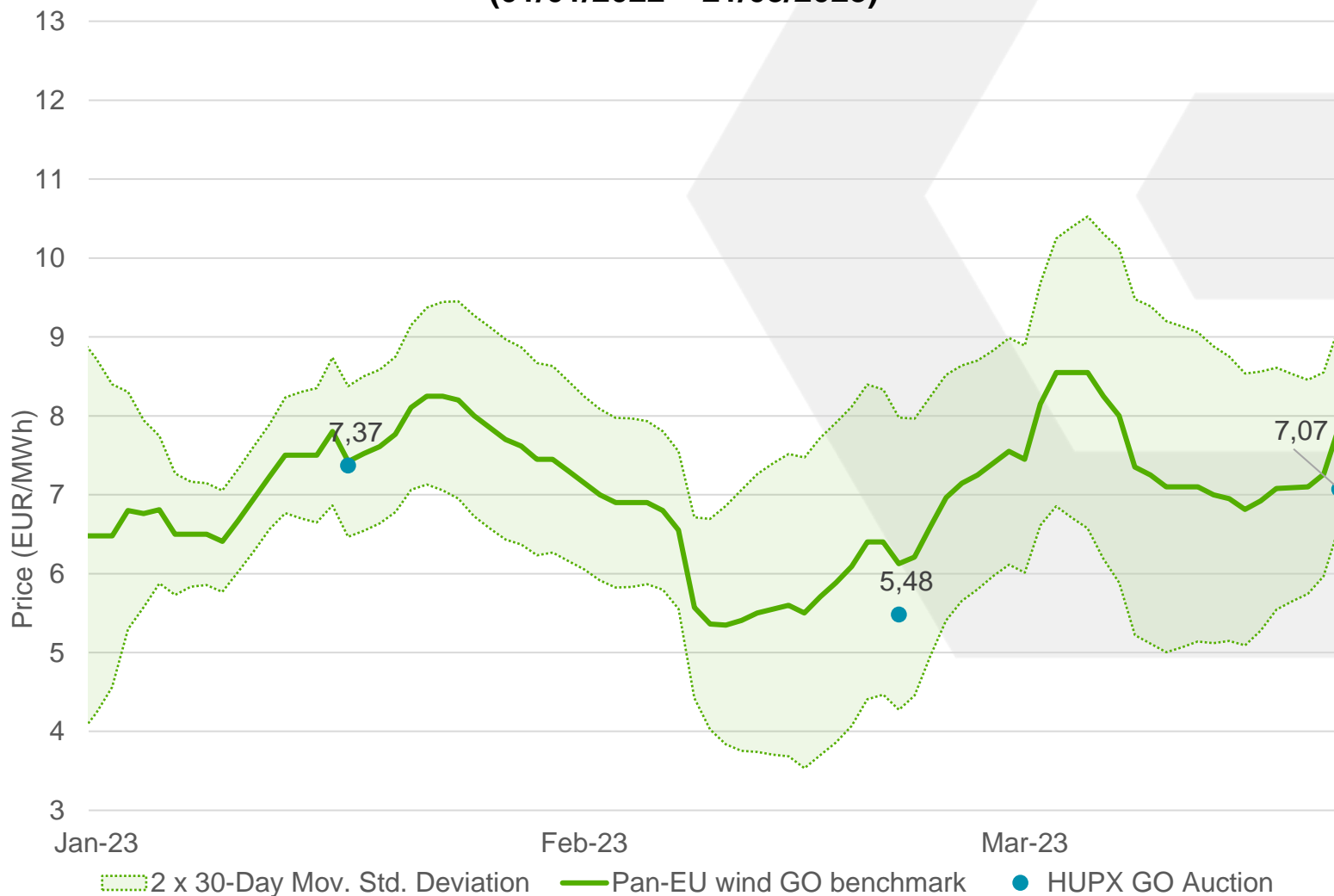
## Notes

- Solar GO price movements show a similar pattern, when January-February was compared to February-March.
- In the second half of February solar GO prices started to rise again.
- In the beginning of March solar GO prices reached 8 EUR/MWh, a key level last seen in December.
- By the middle of March prices dropped again reaching 6.56.
- Volatility increased compared to last month values, the double of the standard deviation grew to 1.70.





### Pan-EU wind GO benchmark and calculated volatility (01/01/2022 – 21/03/2023)



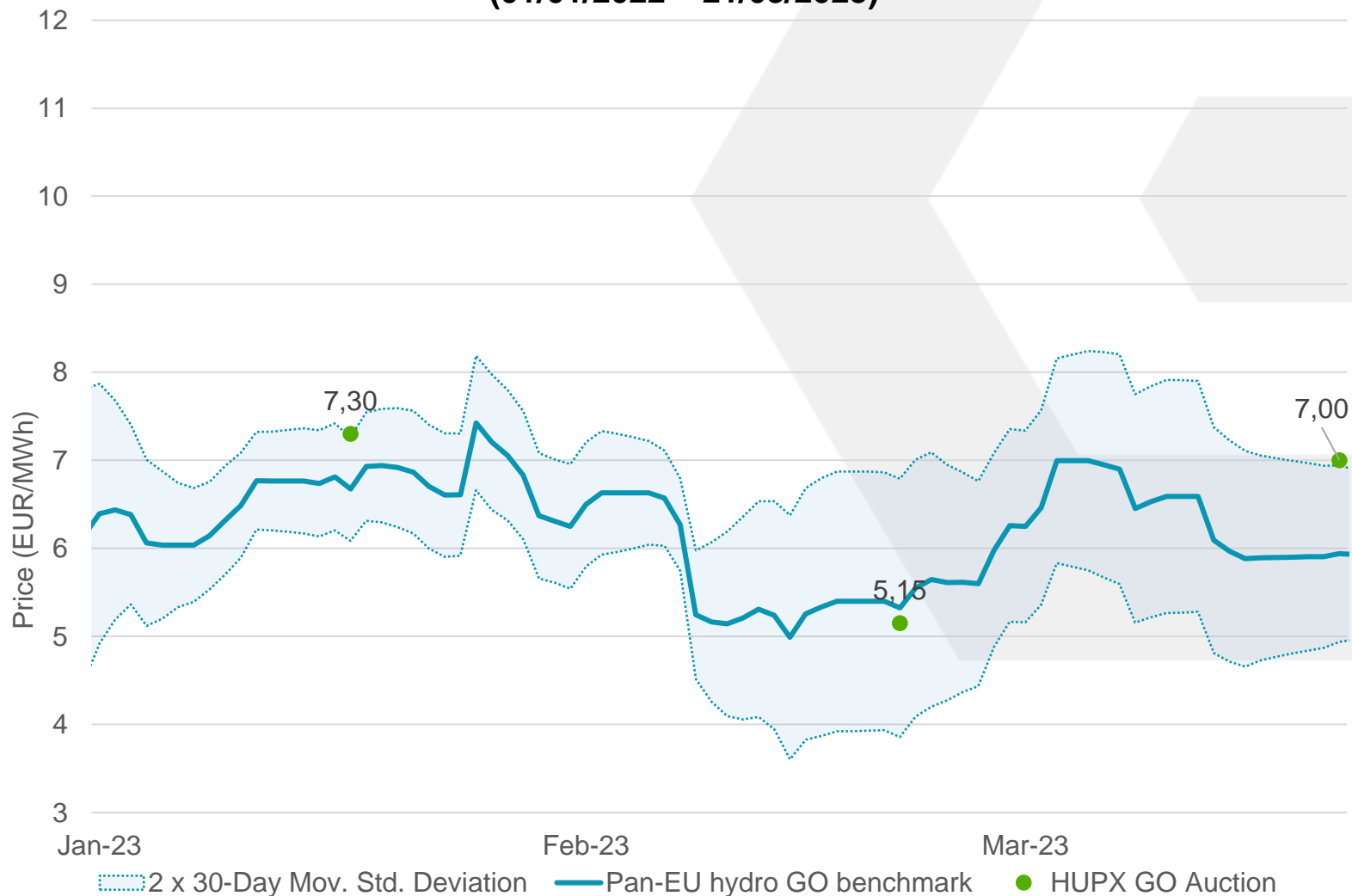
## Notes

- Unlike in the previous months, wind GO prices showed similar patterns compared to solar GO prices, which may imply that wind generation drove these prices.
- Latest HUPX GO auction price for wind technology was cheaper compared to the benchmark.
- Wind GO prices also surpassed the 8 EUR/MWh key level, however this is lower compared to December values.
- By the middle of March prices dropped and reached 6.85 EUR/MWh, the highest compared to other technologies.
- Volatility decreased in the past 30 days, the double of the standard deviation was 1.64.





### Pan-EU hydro GO benchmark and calculated volatility (01/01/2022 – 21/03/2023)



## Notes

- Hydro prices remained moderate both in terms of price levels and price movements in the past months.
- In the last month hydro GO benchmark showed slightly different characteristic compared to solar and wind benchmarks.
- Hydro GO prices remained in the 5-7 EUR/MWh range in February and March.
- In March prices dropped again below the 6 EUR/MWh mark, reaching 5.95 by the mid of March.
- Volatility decreased notably, the double of the standard deviation for the hydro GO benchmark was only 1.16.





# TRADED VOLUMES

EUROPEAN ORGANIZED GO MARKETS



# Traded volumes of European organized GO auctions

## Notes

- In line with the large domestic renewable production of France, Portugal and Italy, **EEX, OMIP and GME** were the largest organized GO markets in Europe in **2022**. In 2023, these exchanges still have the most significant role.
- Among the smaller ones **HUPX GO market was the largest** in 2022. In 2023, HUPX is still the most relevant organized market, but due to seasonality, the traded volume has been lower.



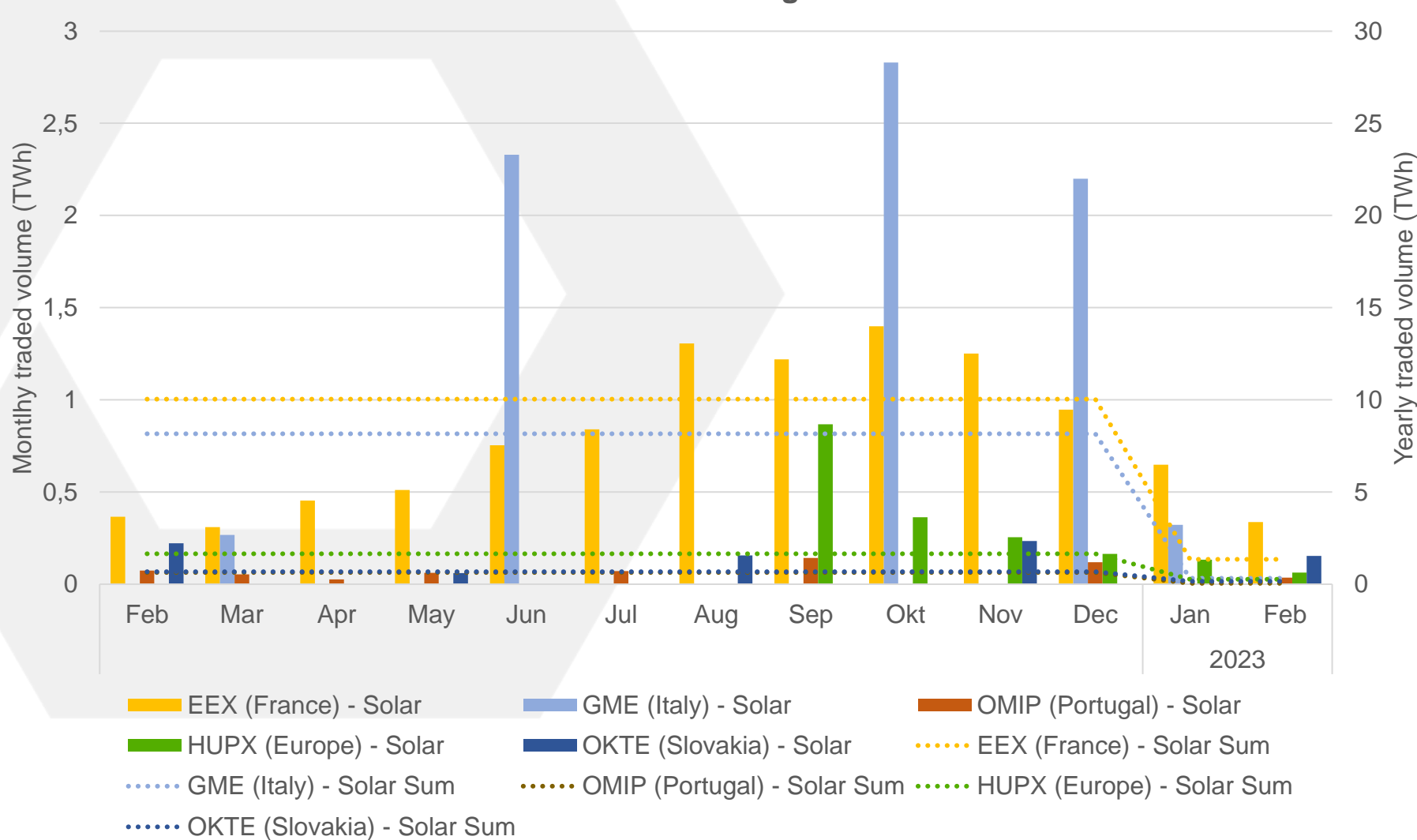




## Notes

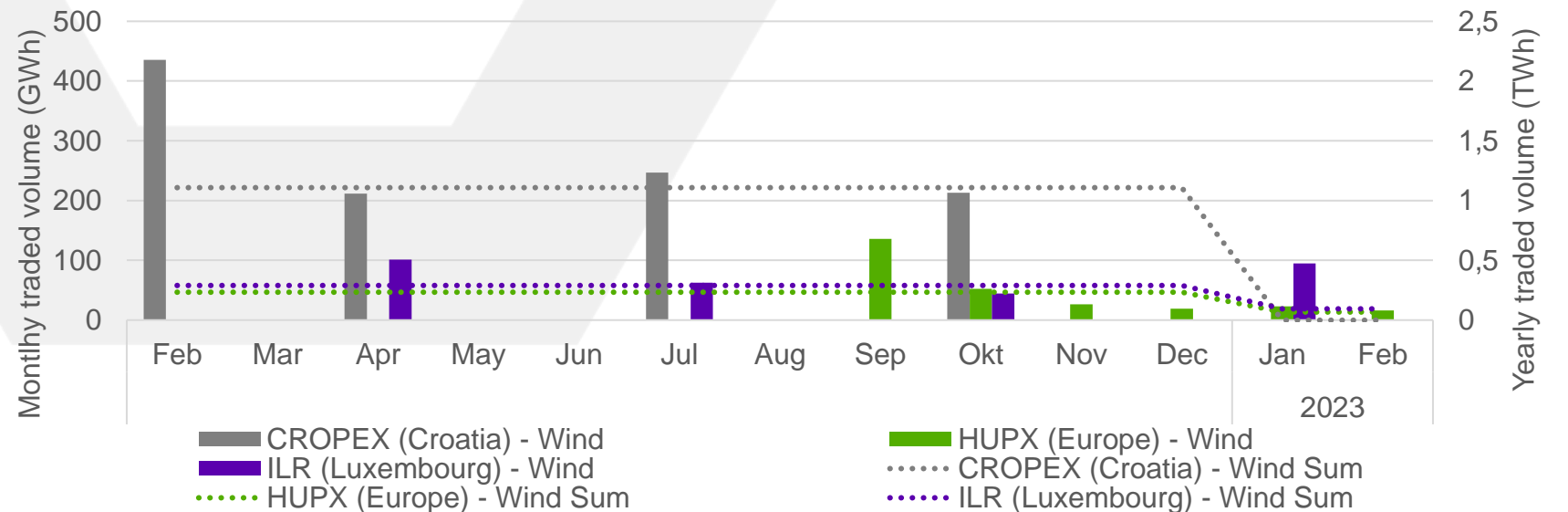
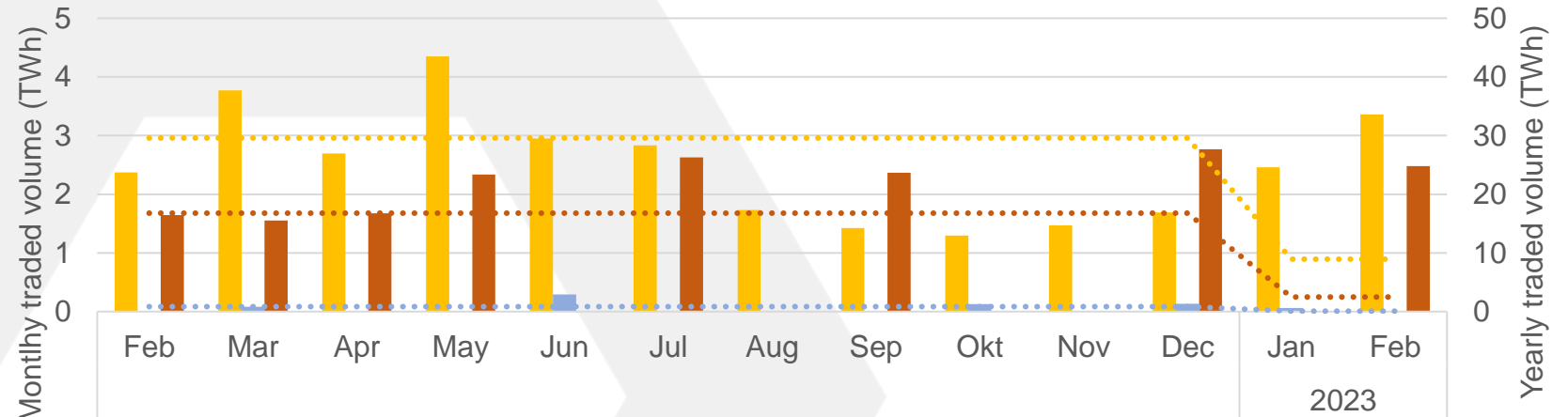
- Among the smaller organized markets, Hungary had the highest solar GO volume, therefore overtook OMIP and became the third largest.
- Due to the seasonality, **only around 100 GWh Hungarian solar GOs were issued and traded in February.**
- The traded volume of **solar GOs for GME** was **reduced significantly to 61% of this January.**
- Solar GOs are still the most prominent Hungarian GO technology type, although their **share compared to the total traded volume was only 63%, down from 76%.**

### Solar GO traded volume on organized GO markets



## Notes

- In 2022 alone the wind GO volumes of EEX were as high as the traded volume of any other organized GO market.
- While GME is a big GO exchange, wind GO volumes were insignificant in Italy.
- CROPEX volumes were strongly supported by wind GOs with more than 1 TWh in 2022.
- The share of wind GOs increased to 17% in Hungary in February.



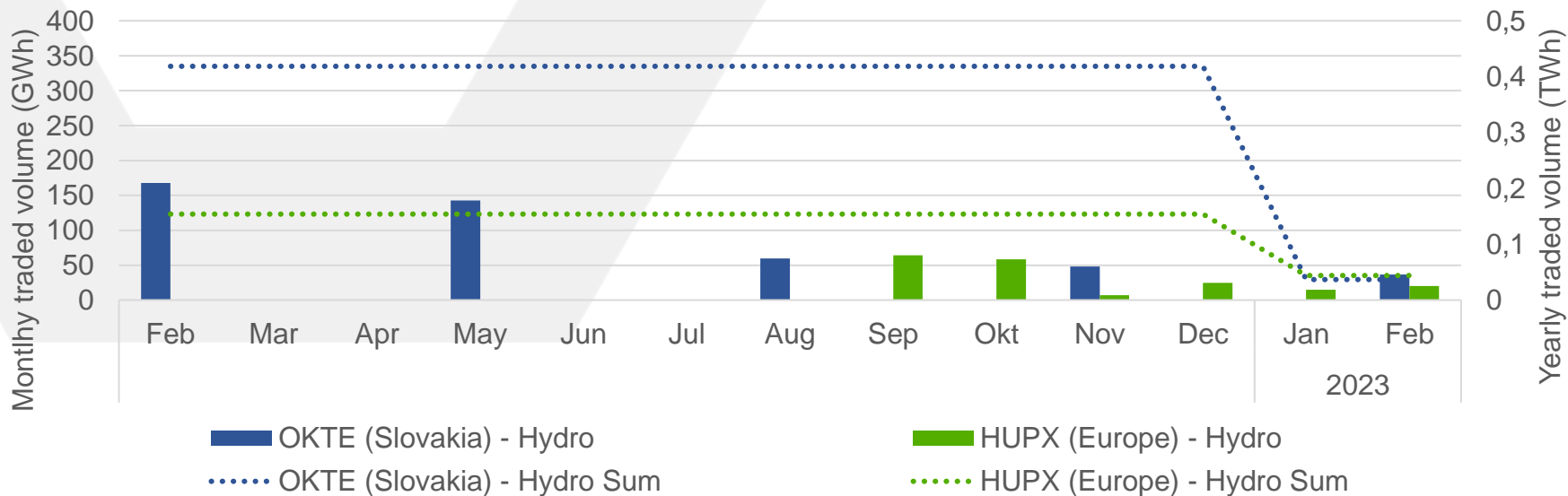
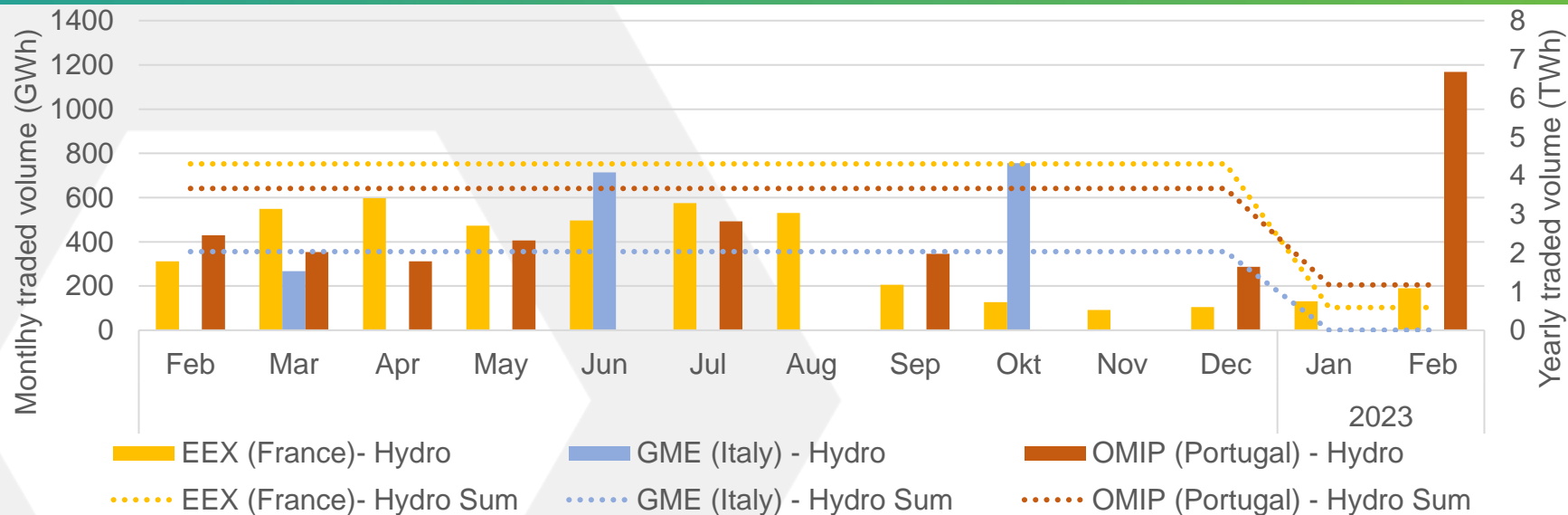


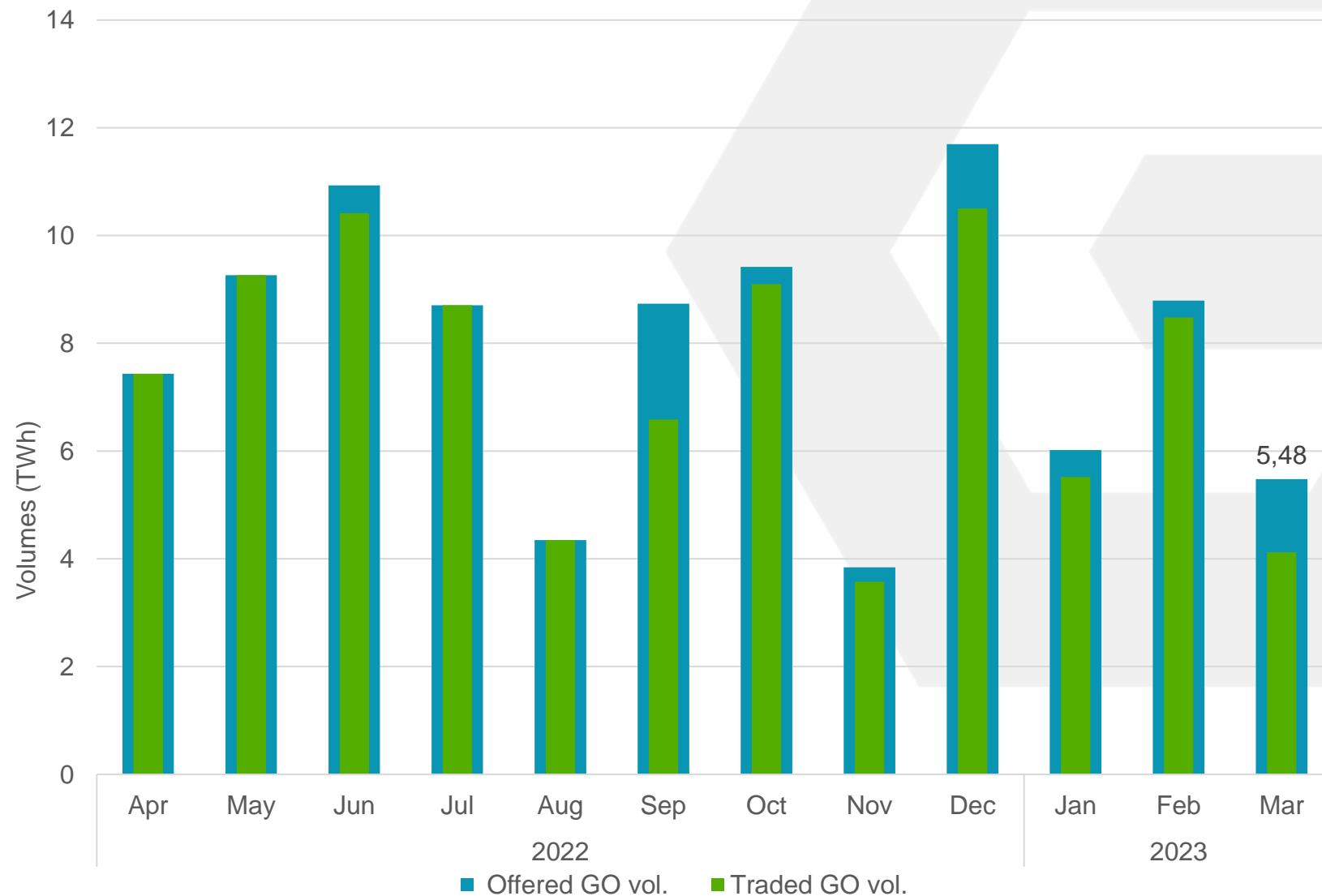
# Volumes of European organized GO auctions – Hydro

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## Notes

- **The Portuguese auction** brought a **record high volume** in terms of **hydro GOs**.
- **Hydro GOs are more relevant at OKTE** compared to other technologies.
- **The hydro GOs were more prevalent** in the HUPX GO Auction in **February**, reaching **21%** of all traded volume.



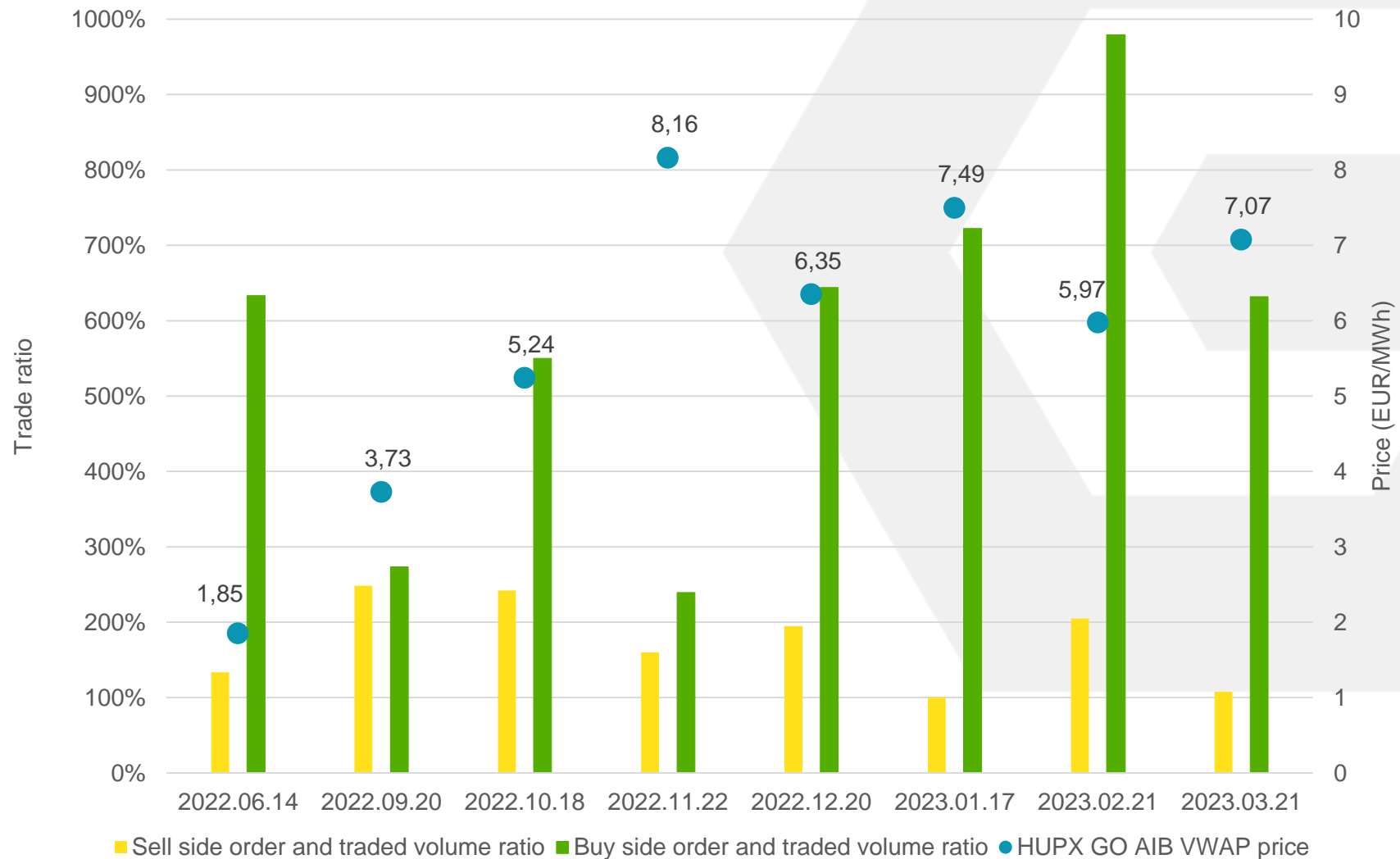


## Notes

- On many organized GO market auctions 100% of the offered GOs were sold. This indicated the strong demand for GOs even though the prices rose significantly.
- In February the trade ratio dropped from 100%.
- This was in line with the high and volatile prices as demand and supply couldn't match in many cases.
- Chart shows only those auctions, where offered volume data is publicly available.



Bids and offered volume ratios, prices of HUPX GO Auctions



## Notes

- In March, the overdemand was still significant but only Hungarian GOs were offered. The VWAP also increased compared to February

## How to participate?

More information:

<https://hupx.hu/en/go-market/members-and-admission>

## Next auction

18th April 2023

<https://hupx.hu/en/go-market/next-auction>

