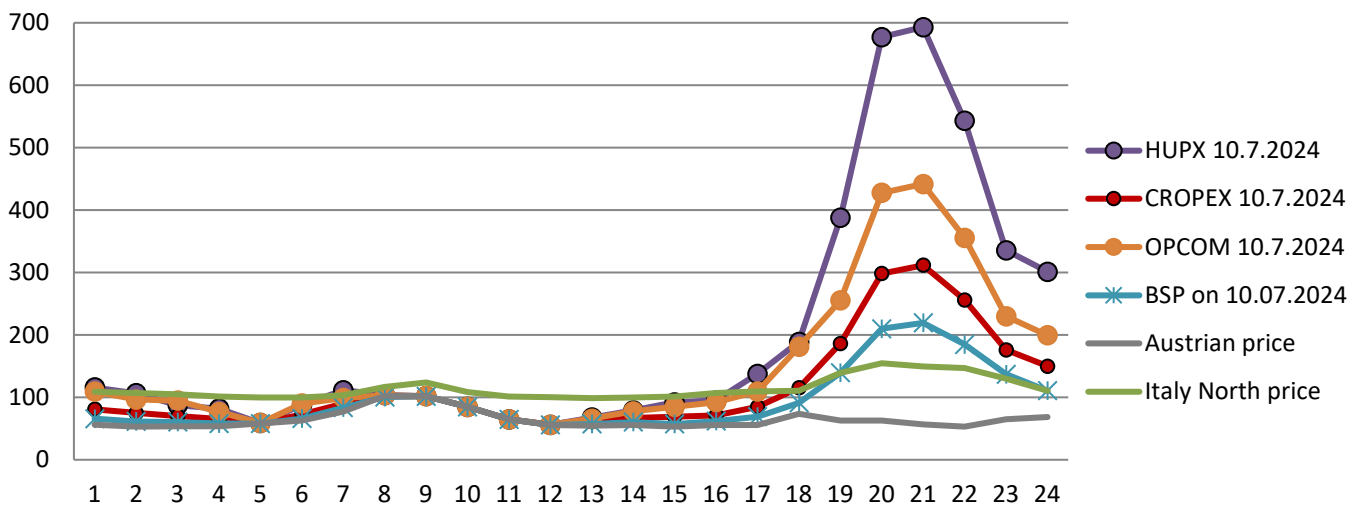


ANALYSIS: EXTREME PRICES ON HUNGARIAN MARKET

– WHY PRICES ARE SO HIGH?

In the last three days, HUPX experienced market prices of 300-700 EUR/MWh in hours H19-H24. This is highly irregular and high temperatures in the WK28 cannot be blamed for that.

Market prices on 10.07.2024



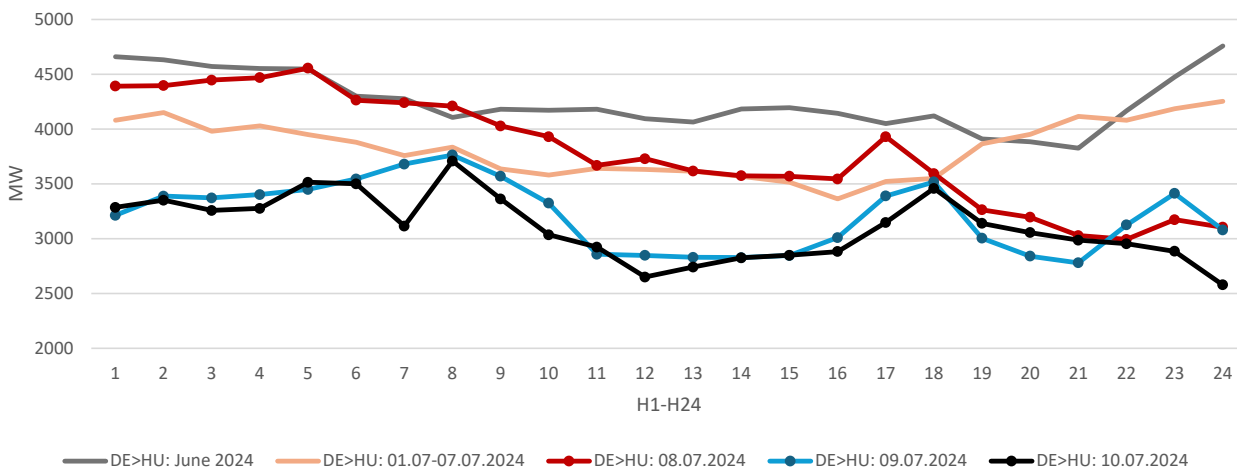
THE MAIN REASONS FOR EXTREME HIGH HUPX PRICES ARE FOLLOWING:

1) Maximal Flow Based Market Coupling (FBMC) exchange towards Hungarian market is greatly reduced after 08.07.2024. This is the most impacting reason for high HUPX and OPCOM prices.

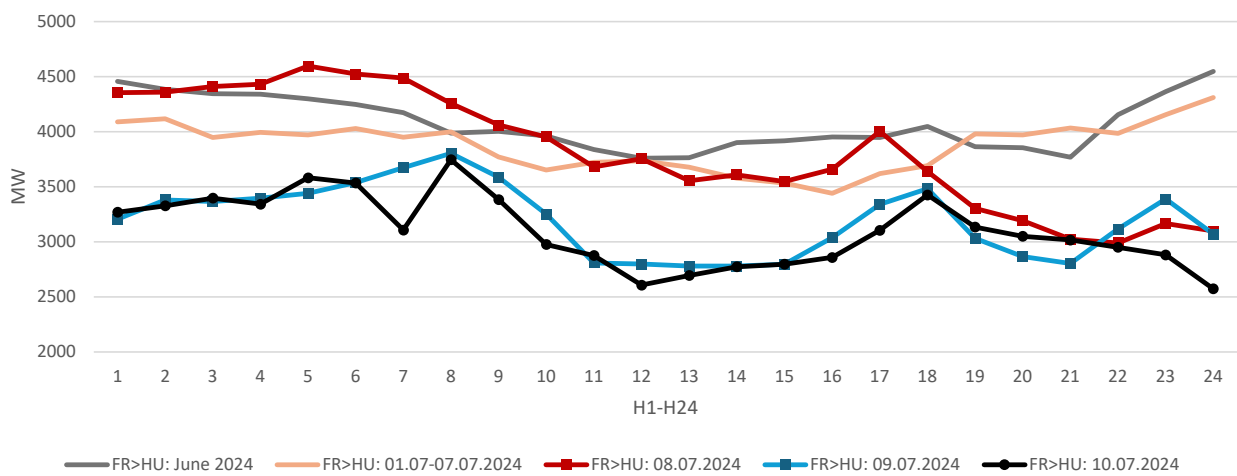
Maximal FBMC exchanges from Western Europe towards Hungary got reduced by 1,200-1,300 MW on average in hours H19-H24 as of 08.07.2024. This is a very unexpected and uncomfortable situation which is happening at the same time when RS>HU and BG>RO NTCs are also reduced.

There are no maintenances in Central-Eastern Europe which could cause such strong reduction of grid capacities in FBMC. It is difficult to estimate until when this reduction will last since it is also difficult to identify what transmission grid maintenance caused this reduction.

Maximal exchange German>Hungary in FBMC

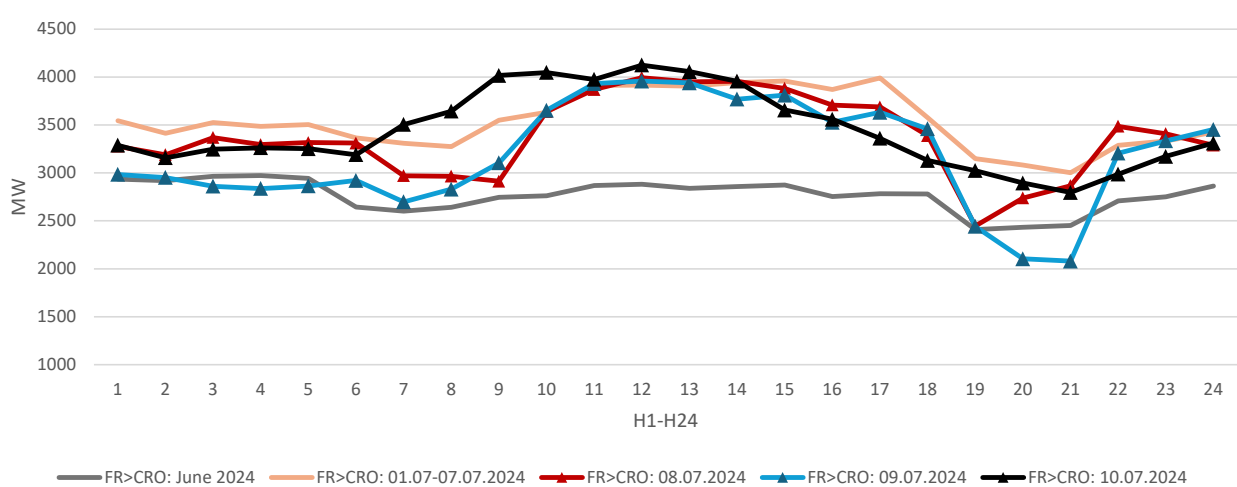


Maximal exchange France>Hungary in FBMC



There is no such high reduction of FBMC capacities in the direction towards Croatia. FBMC capacities towards Croatia are still very high in relation to the Croatian short positions.

Maximal exchange France>CROATIA in FBMC



2) BG>RO capacity is reduced from 1,700 MW on 1,200 MW due to maintenances in transmission grid until 22.07.2024, which makes Romania dependent on imports from Hungary on the HU>RO border due to extremely low wind power generation in Romania and increased consumption in Romania with rising temperatures.

Romania is supplied from Hungarian market in FBMC, however in a very non-intuitive manner. In hours H18-H24 all available selling offers on the Romanian market are taken and the only solution for FBMC is to nominate high commercial flow from Hungary to Romania. However, flow from Hungary to Romania is somehow nominated in highly counter intuitive manner since FBMC gives to OPCOM much lower price than to HUPX (sometimes even 250 EUR/MWh lower price than HUPX) while delivering energy from HUPX to OPCOM. This is difficult to explain, but this flow from Hungary to Romania makes a huge pressure on HUPX.

Once Bulgarian>Romanian border is increased or wind power generation in Romania is higher, HUPX will have less pressure.

3) SR>HU capacity is reduced from 800 MW on just 200 MW since 25.06.2024

Once this capacity is recovered, market conditions on HUPX will be much better since traders can not bring energy to Hungarian market without this border since all other borders are in the FBMC.

The reasons for this reduction are not clear, but a possible reason could be the maintenance of the RO-HU transmission line Nadab – Bekescsaba which was planned for the period 21.05.2024 – 12.07.2024. For both June and July there were reduced auctioned capacity volumes on both RO>HU and SR>HU border.

Possibly after 12.07.2024, SR>HU NTC should increase which will reduce pressure on HUPX.

4) NPP Kozloduy has a delayed entry and still did not stabilize generation at 2,100 MW. The 1,000 MW unit came back in operation on 08.07.2024 between 08:00-09:00 after more than three weeks of unplanned outage, but on 09.07.2024 it still did not reach maximal output and it is questionable how much of this 1,000 MW unit is being sold on the market at the moment.

5) Entry of 1000MW unit in NPP Kozloduy will have limited impact on HUPX in hours H19-H24.

BG>RO and SR>HU borders are anyhow fully nominated in hours H19-H24 and no additional energy from NPP Kozloduy can get to Hungarian and Romanian markets in those hours.

Nominating additional energy to Croatia will have minor impact on HUPX in FBMC since FBMC simply does not work in the same way as NTC based coupling. In the last three days Croatian market is settling even 400 EUR/MWh below HUPX in some hours although there is a plenty capacity between Croatia and Hungary in the direction to Hungary. However, there is still some NTC which is not utilized on BG>SR and SR>RO borders which can be used to bring energy from NPP Kozloduy to Romania and induce lower HUPX prices.

6) Finally, a reason for high prices is the increase of selling offers prices on all markets, mostly on the Greek market. Stress on the market just feeds even higher stress. The first highly stressful day (08.07.2024) induced the price increase of selling offers which resulted in even higher market prices which in turn fueled additional increase of prices of selling offers for tomorrow and for day after tomorrow.

It is not just the lack of energy which causes high HUPX prices, but also the price of energy from the same sources is offered at the much higher price than before. This can be observed through aggregated curves on power exchanges. Selling curves have the same shape as during the last week, but much higher price. Although there are no many price sensitive selling offers on HUPX, it is visible that the price of the typical selling offers highly increased.

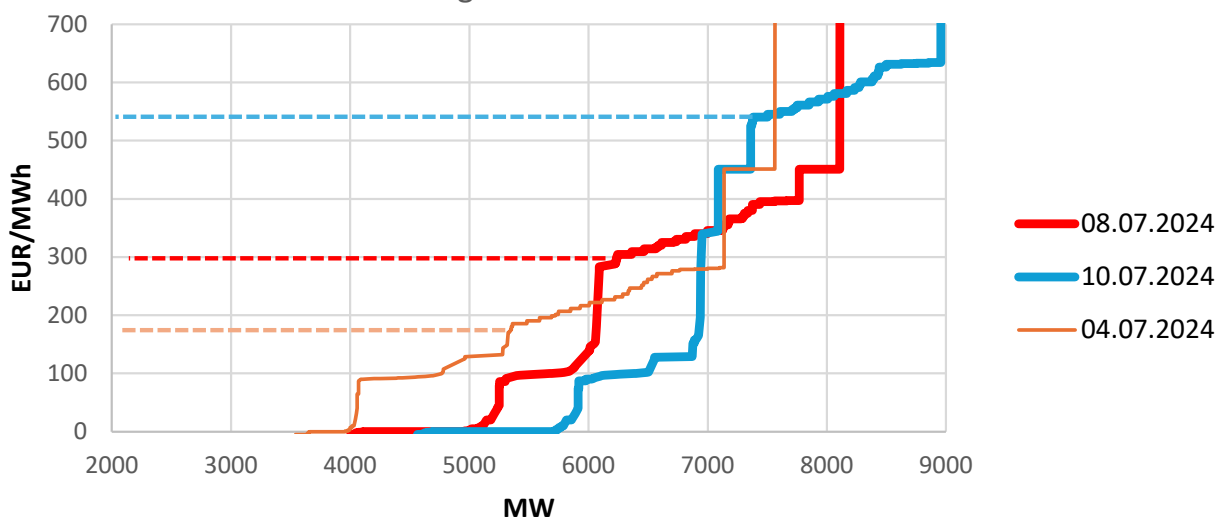
On the Greek market, the last 2,000 MW of offered energy is now offered at much higher price than during the last week in hours H19-H24. Each day around 2,000 MW is offered on the Greek market in incremental steps, but the first step was offered at 190 EUR/MWh on 04.07.2024, at 300 EUR/MWh on 08.07.2024 and 530 EUR/MWh on 10.07.2024.

Such increasing price of selling offers makes traders afraid to nominate exports from Greece on Northern Macedonian and Albanian borders in order to deliver energy to Hungary, Croatia or Romania. Panic induces price increase and price increase fuels panic.

There is no lack of energy on Greek, Bulgarian, Northern Macedonian, Albanian, Montenegrin, Serbian and Croatian markets – it is just the case that available energy go offered at much higher price than last year.

The real lack of energy is present only on Hungarian and Romanian markets.

H20: Greek market selling curves



WHAT TRADERS CAN DO *(there are very limited possible actions to mitigate such huge risks due to greatly reduced cross-border capacities)*

- Nominate additional energy BG>RS + RS>RO so that entry of NPP Kozldouy can make an impact on OP-COM/HUPX.
- Nominate higher flows from Greece and Italy towards Serbia and then to Romania on the Serbian>Romanian border. This will reduce pressure for HUPX to supply Romanian market in FBMC. This should particularly be possible after NMK>RS border is back in operation on 13.07.2024.
- Observe RS>HU capacity increase, once it is increase nominate energy from Greece/Italy to Hungary in order to reduce pressure on Hungarian market.
- Observe maximal possible FBMC grid capacities, once they are increased there will be no extreme prices on HUPX anymore.

10-Year price forecast for HUPX and SEE power markets 2025 - 2035

Hungary, Romania, Bulgaria, Greece and other SEE countries

Created as guideline for strategies optimization of Investors in renewable generation, conventional generation owners and power utilities, investors in battery storage, national ministries and regulators, optimization of portfolio of power traders, suppliers and industrial consumers

The report provides and explains referent power prices for 2025-2035, risks of negative prices and prices below German market, strategies for, safeguarding, scaling up or down of investment, optimization of trading, supply or consumer portfolio

Extensive short and long term trading strategies

BI-Weekly Risk and Portfolio report

“Bi-weekly risk and portfolio optimization report” is focused on trading and risk mitigations strategies on Hungarian and SEE markets. It contains concrete advices and strategies for trading and managing of opened positions for: Week+1, Week+2, Month+1, Month +2, Quarter+1, Quarter+2, Year+1 products.

The “Bi-Weekly risk and portfolio report” is delivered as an extensive 70-90 pages document on bi-weekly basis which contains advices for trading and the most important global and regional factors which can impact Hungarian and SEE power markets during the next two weeks.

Month ahead trading strategies

Month-ahead Trading Advisory and “HUPX+SEE Trading Tool”

“Monthly trading advisory” is an extensive month-ahead forecast and analysis of Hungarian and SEE markets. This type of service is intended to give detailed analytics, alternative ideas, trading strategies, out-of-the box thinking - with a goal to challenge opinions, actions and strategies of your traders and analysts.

“Trading Strategy” document is published some 30 days before the delivery month starts. Subscription to “Monthly trading strategies” also includes an optional presentation and discussion with our expert

Daily trading strategies for HUPX and HENEX

“HUPX + SEE Spot Support”

Day ahead forecasts for Hungarian power exchange is published at 08:30 CET, with a 10:00 CET update. In addition to hourly price forecast and detailed overview of critical grid elements in Flow Based Market Coupling, aim of daily reports is also to provide spot traders with all the data and analytics they might need for day-ahead trading, live power plants outage info and all other information relevant for spot trading.

HUPX + SEE Spot Support report also includes detailed Week-ahead HUPX forecast.

Know what happened on your market with weekly and monthly review

“Hungarian and SEE markets review”

The reports provide analytics and detailed explanations of power balance and price moves which happened on forward and spot markets in the previous week and month on Hungarian and SEE markets. The report is intended for power Traders, Utilities, Producers, Regulators, Transmission System Operators, Power exchange Administrators, Ministries and Assets owners. The report can also be useful for traders to re-evaluate their decisions during the past week and month.

SEE Price Forecasts

Day-ahead, Week-month
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Analyses, scenarios and evaluation of

- Risk of negative prices and portfolio optimization
- Growth of new Solar and Wind capacities
- Grid limitations, congestions and development
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- Behavior of conventional generation capacities
- Power demand growth
- Phase-out and commissioning of generation

